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Nos. 76-419 and 76-528

IN THE

Supreme Court of the United States

OCTOBER TERM, 1976

No. 76-419

VERMONT YANKEE NUCLEAR POWER CORPORATION,
Petitioner,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC., *et al.*,
Respondents.

No. 76-528

CONSUMERS POWER COMPANY, *Petitioner,*

v.

NELSON AESCHLIMAN, SAGINAW VALLEY NUCLEAR STUDY GROUP, *et al.*, *Respondents.*

On Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

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BRIEF FOR PETITIONER CONSUMERS POWER COMPANY

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BRIEF FOR PETITIONER CONSUMERS POWER COMPANY

OPINION BELOW

The opinion of the Court of Appeals in the *Consumers Power* proceeding is reported at 547 F.2d 622, and appears in the Joint Appendix at pages 89-

111.* The decision of the Court of Appeals in the *Vermont Yankee* proceeding, decided on the same day and in effect incorporated into the decision in the *Consumers Power* proceeding, and the separate statements of Judges Bazelon and Tamm appear in the Joint Appendix at pages 28-86. The Court of Appeals order of October 8, 1976, correcting that decision appears in the Joint Appendix at pp. 87-88, and the decision, as so corrected, is reported at 547 F.2d 633. The decisions of the Atomic Energy Commission (later the Nuclear Regulatory Commission) in the *Consumers Power* proceeding are as follows: the initial decision of the Atomic Safety and Licensing Board of the Atomic Energy Commission of December 14, 1972, which appears in the Joint Appendix at pages 184-222 and is reported at 5 A.E.C. 261; the first decision of the Atomic Safety and Licensing Appeal Board on February 20, 1973, denying a motion for a new hearing, which appears in the Joint Appendix at pages 223-240 and is reported at 6 A.E.C. 60; the second and third decisions of the Appeal Board relating to the merits of the case, on March 26 and May 18, 1973, which appear in the Joint Appendix at pages 241-321 and are reported at 6 A.E.C. 182 and 6 A.E.C. 331; the decision of the Commission on January 24, 1974, following the filing of the petition to review, which appears in the Joint Appendix at pages 324-345 and is reported at 7 A.E.C. 19; the decisions of February 5, February 20 and April 11, 1974, which appear in the Joint Appendix at pages 346-347, 348-349, 350-351, respectively, and are reported at 7 A.E.C. 147, 149 and 311.

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* References to the Appendix to this brief are designated "App. ——." References to the Joint Appendix are designated "Joint App. ——."

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JURISDICTION

The opinion of the Court of Appeals in the *Consumers Power* proceeding, which constitutes its judgment, was entered on July 21, 1976. The petition for a writ of certiorari was granted and the proceeding consolidated with that in *Vermont Yankee*, on February 22, 1977. The jurisdiction of this Court rests on 28 U.S.C. § 1254(1).

STATUTE AND REGULATION INVOLVED

The Appendix contains the relevant statutory provisions of the Atomic Energy Act of 1954 (42 U.S.C. §§ 2011 *et seq.*), App. pp. A-2-A-20, of the Energy Reorganization Act of 1974 (42 U.S.C. §§ 5801 *et seq.*), App. pp. A-21-A-64, and of the National Environmental Policy Act (42 U.S.C. § 4332), App. pp. A-25-A-27.

QUESTION PRESENTED

Did remand by the court below to the Nuclear Regulatory Commission of its orders granting petitioner licenses to construct a nuclear generating plant seriously misconstrue the relevant statutes in a way which threatens to frustrate the nation's nuclear energy program, and constitute such an unwarranted intrusion by the court into the administrative process as to call for review and reversal by this Court?

STATEMENT

The *Consumers Power* proceeding in the court below involved two petitions to review final orders of the Atomic Energy Commission—now the Nuclear Regulatory Commission—authorizing the issuance to petitioner Consumers Power Company (Consumers)

of permits to construct two nuclear reactors to generate electricity and process steam on a 1200-acre tract in Midland County, Michigan. The two petitions were consolidated in the court below and heard and decided together. On the same day, the court below decided the *Vermont Yankee* proceeding, with which the *Consumers* proceeding is consolidated in this Court, and in effect incorporated the *Vermont Yankee* decision in its decision in the *Consumers* proceeding. The relevant facts in the *Consumers* proceeding are as follows:

Consumers' application for permits to construct the plant was filed with the Commission in January 1969, pursuant to Sections 103, 182, 185 and 189 of the Atomic Energy Act of 1954 (Act) (42 U.S.C. §§ 2133, 2232, 2235 and 2239). The proposed facility is designed for co-generation. Some 1,300 megawatts of electricity will be generated for Consumers' integrated electric system in Michigan, as well as substantial amounts of process steam for an adjacent Dow Chemical Company complex. As required by Section 185 of the Act and the Commission's regulations (10 C.F.R. § 50.34), the application included a Preliminary Safety Analysis Report.

The application, including the four-volume Safety Analysis Report, was reviewed by both the Commission staff and the Advisory Committee on Reactor Safeguards, a body that is required to review each application and to make a publicly available report to the Commission concerning safety. See §§ 29 and 182(b) of the Act (42 U.S.C. §§ 2039, 2232(b)). The staff, after nearly two years of study and having received answers to its numerous requests for further information, issued a favorable Safety Evaluation on November 12, 1970 (R. 2605). The Advisory Com-

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mittee had a few months earlier, on June 18, 1970, reached the same conclusion (R. 2616), and it reaffirmed its decision on September 23, 1970 (R. 2618).

On October 29, 1970, an Atomic Safety and Licensing Board was designated pursuant to Section 191 of the Act (42 U.S.C. § 2241) to hold public hearings on whether the construction permits should be granted. Hearings on radiological health and safety matters began on June 21, 1971, and lasted for 17 days. The petitioners below, Aeschliman, *et al.*, and Saginaw Valley, *et al.* (referred to hereinafter as "intervenors") were granted permission to intervene. On the final day of these hearings, the decision in *Calvert Cliffs' Coordinating Committee, Inc.* v. *Atomic Energy Commission*, 449 F.2d 1109 (D.C. Cir. 1971) invalidated the Commission's then regulations under the National Environmental Policy Act (NEPA). Accordingly, the Commission revised its regulations (10 C.F.R. Part 50, App. D, now Part 51), and undertook a further extensive environmental review of the proposed Midland licensing action. A Draft Environmental Statement was issued in January 1972 and, after comments on it had been received from government agencies and the public, a Final Environmental Statement was issued in March 1972. The statement concluded that the construction permits should be issued, subject to Consumers taking certain steps to protect the environment. During May and June 1972, 14 days of further hearings before the Licensing Board were held on environmental matters. On December 14, 1972 the Licensing Board, in a lengthy decision dealing with both the safety and the environmental issues, concluded that the construction permits should be issued, subject to certain conditions

to protect the environment. Joint App. pp. 184-222. That decision became immediately effective, notwithstanding further review (10 C.F.R. § 2.764), and construction has therefore been proceeding for more than four years, at a cost to date exceeding $450 million.[1]

Any party may take an appeal from the initial decision of the Licensing Board by filing exceptions, which are then reviewed for the Commission by an Atomic Safety and Licensing Appeal Board. 10 C.F.R. §§ 2.762, 2.765. The intervenors duly filed exceptions and, upon review, the Appeal Board, in a series of decisions, essentially affirmed the decision of the Licensing Board, subject to certain conditions relating to quality assurance. The first opinion (Joint App. pp. 223-240) rejected a motion for intervenor Saginaw for a new hearing on the ground of bias of the members of the Licensing Board. Its second opinion (Joint App. pp. 241-253)related to issues of quality assurance and quality control. Its final opinion (Joint App. pp. 254-321) dealt with all other aspects of the decision of the Licensing Board. The Commission did not review or amend the action of the Appeal Board embodied

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[1] The regulatory scheme contemplates that construction will commence immediately following the licensing board's favorable decision notwithstanding the fact that, as in this proceeding, the decision may be subject to further administrative and judicial review. The regulations (10 C.F.R. § 2.764) provide that the initial decision of the licensing board "shall be effective immediately upon issuance . . ." subject to further review within the Commission and that the construction permit shall be issued within ten days after the issuance of the initial decision. While undertaking construction where the authorization may later be revoked or significantly modified creates substantial risks for the utility, the controlling economic, legal and other related aspects of the situation in which the utility finds itself ordinarily compel it to proceed.

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in these three decisions, and they became the final decision of the Commission. 10 C.F.R. §§ 2.760, 2.786.

On July 16 and August 9, 1973, intervenors filed separate petitions for review in the court below, which subsequently consolidated the two proceedings. (Joint App. pp. 13, 19, 21.) While the cases were pending, intervenor Saginaw filed a motion with the Commission to "clarify" the decision of the Appeal Board and to reopen the proceedings in the light of the Commission's then recent decision on the treatment of energy conservation issues in *Niagara Mohawk Power Corp.*, 6 A.E.C. 995 (1973). On January 24, 1974, the Commission issued, and there was filed with the court below, a Memorandum and Order dealing at length with that issue, and denying the motion to reopen the proceeding. Joint App. pp. 324-345. On January 23, 1974, intervenor Saginaw filed another petition to reopen the proceedings to reassess the cost-benefit analysis because of increases in projected construction costs since the hearing. The Commission denied the petition (Joint App. pp. 346-347) and likewise denied a subsequent supplement to the petition in the nature of a petition for rehearing. Joint App. pp. 348-349.

The court below deferred its decision in this case until the issuance of its decision in the *Vermont Yankee* proceeding (Joint App. pp. 28-86), also decided on July 21, 1976. After having had the petitions for review under advisement for some 20 months, it remanded the Midland proceeding to the Commission for further proceedings. While rejecting some of the intervenors' objections, the court sustained the argument by intervenor Saginaw that the Environmental Impact Statement was fatally defective

for failure adequately to examine energy conservation as an alternative. Intervenor's comments on the draft Environmental Impact Statement, the court held, raised a "colorable alternative" of energy conservation which made it "incumbent on the Commission to undertake its own preliminary investigation of the proffered alternative sufficient to reach a rational judgment whether it is worthy of detailed consideration" and to "explain the basis for each conclusion" (Joint App. pp. 100-101), which, it concluded, the Commission had not done.

The court also sustained the argument of intervenor Saginaw that the report of the Advisory Committee on Reactor Safeguards (ACRS), which had reviewed the sophisticated engineering and safety problems involved in Consumers' application and made specific recommendations concerning some of them, was inadequate in that it stated, without further specification, "Other problems relating to large water reactors have been identified by the Regulatory Staff and the ACRS and cited in previous ACRS reports." That, the court held, did not comply with the statutory mandate that the Committee's reports be made public. Joint App. pp. 104-106.

Finally, the court incorporated by reference its contemporaneous decision in the *Vermont Yankee* proceedings (Joint App. p. 109), in which it concluded that the Commission had been "capricious and arbitrary" in its consideration of waste disposal and reprocessing issues in its rulemaking proceeding on those issues. Joint App. p. 71. The Commission was directed to undertake "appropriate consideration" of such issues and to "restrike the cost-benefit analysis." Joint App. p. 109. Motions by Consumers and the Government to stay the mandate pending

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application to this Court for a writ of certiorari were denied on September 2, 1976.

ADMINISTRATIVE PROCEEDINGS FOLLOWING THE DECISION BELOW

Shortly after the decisions of the court were announced, the Commission responded with a General Policy Statement (41 Fed. Reg. 34,707, Aug. 16, 1976, App. pp. A-28-A-36) stating that, subject to further judicial review and notwithstanding "significant impacts on the availability and costs of nuclear power facilities" (App. p. A-31), there would be a moratorium on the issuance of licenses for either construction or operation of nuclear power plants at least until a possible interim fuel cycle rule could be issued (App. p. A-31). The Statement likewise announced that the hearings before the Commission in the *Vermont Yankee* and *Consumers* cases should be reopened to determine whether the licenses already issued (for construction, in the present case, and for operation, in the *Vermont Yankee* case) should be suspended or modified (App. p. A-34), and that the question of suspension or modification would also "arise on a request for a show cause order seeking the suspension or modification on fuel cycle grounds of any other nuclear power plant license." App. p. A-34.

On October 13, 1976, the Commissioner issued a notice of proposed rulemaking for an "interim" fuel cycle rule for use while proceedings for a "final" rule were going forward. 41 Fed. Reg. 45,849, Oct. 18, 1976, App. pp. A-37-A-51. The proposed interim rule incorporated slightly revised values, based on a new study, for the waste management and fuel reprocessing portions of the nuclear fuel cycle.

Thereafter, on November 5, 1976, the Commission modified its previous position on suspensions. In a Supplemental General Statement (41 Fed. Reg. 49,898, Nov. 11, 1976), the Commission announced that it would not initiate further show cause proceedings against holders of construction or operating licenses, that it would suspend the show cause proceedings previously initiated pending the anticipated adoption of an interim rule, and that it would resume licensing in individual cases where use of the proposed interim rule would not tilt the cost-benefit balance against the issuance of the license. App. p. A-55.

On March 7, 1977, on the basis of the notice and written comments, the Commission adopted a "final interim" rule, embodying revised values for waste disposal and reprocessing, to be effective until September 14, 1978, *i.e.*, for approximately eighteen months. 42 Fed. Reg. 13,803, March 14, 1977, App. pp. A-57-A-77.[2] The notice states that values contained in the interim rule as adopted are not substantially different from the values as proposed; in addition, the values in the rule as adopted are not sufficiently different from those invalidated by the court below as "to warrant revocation or suspension on cost-benefit grounds." App. p. 70. Accordingly, the notice stated that show cause proceedings ini-

[2] The notice states that some of the comments received in response to its October 13, 1976 notice of proposed rulemaking and invitation for such comments raised "the question whether an interim rule, without the benefit of oral hearings, is an appropriate mechanism . . ." in the circumstances. App. p. A-68. With emphasis on the interim character of the rule, the notice sets forth a legal justification for not conducting oral hearings. App. pp. A.68-A.71. 42 Fed. Reg., *supra* at 13,805-13,806.

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tiated pursuant to the General Statement of Policy and suspended pursuant to the Supplemental General Statement of Policy "will be terminated." App. p. 70.

However, on April 1, 1977, the Commission issued an order directing that the Appeal Board involved in each of the ten show cause proceedings which had been initiated (other than *Consumers Power*) to determine the impact of the interim rule on the cost-benefit balance which had been struck for each of the facilities involved. CLI-77-10, 5 NRC ——. On April 21, 1977 the Appeal Boards, acting jointly, issued a memorandum and order in those ten proceedings, and also in three other proceedings in which judgment on uranium fuel cycle matters had been reserved pending the promulgation of the interim rule, inviting submissions within thirty days from the parties in each proceeding assigning reasons why, in the light of the interim rule, the cost-benefit balance for the facility "tips, or might tip, in favor of the abandonment of the facility." ALAB-392, NRCI-7714, 5 NRC ——. (Slip Op., p. 13). As of the date of this brief, no decisions with respect of any of these proceedings have been reached. Further, on May 13, 1977, a petition to review the decision of the Commission adopting the "final interim" rule was filed in the court below." *NRDC* v. *NRC,* No. 77-1448.

The post decision proceedings involving *Consumers Power* have followed a somewhat different course. At the same time the Commission issued its General Statement of Policy it also issued a separate memorandum and order in the *Consumers Power* proceeding, reconvening a licensing board to determine whether the construction permits for Midland "should

be continued, modified or suspended until an interim fuel cycle has been made effective." CLI-76-11, NRCI-76/8, 65 (August 16, 1976). When the mandate was issued on September 3, 1976, the Commission treated that action as a direction from the court "to proceed with all remanded issues promptly and without awaiting Supreme Court disposition." CLI-76/9, 163, 164, September 14, 1976. Accordingly, it did not suspend the Consumers show cause proceeding when it suspended the other show cause proceedings.[3] Rather, hearings were directed to go forward both with respect to the initial suspension or modification issue, and with respect to the substance of the "remanded" issues.[4] After the grant of certiorari, Consumer's request to defer those hearings was denied.[5] The hearings on whether the construction permits should be continued, modified or suspended pending the outcome of the remanded issues have, as of the date of this brief, consumed 30 hearing days. No decision has issued. No schedule has yet been set for hearings on the remanded "substantive" issues.

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[3] On October 8, 1976, the court below did grant a stay of mandate in the Vermont Yankee proceeding "on condition that the United States Nuclear Regulatory Commission shall make any licenses granted between July 21, 1976 and the time when the mandate is issued subject to the outcome of the proceedings herein." Jt. App. p. 12.

[4] When show cause proceedings based solely on fuel cycle grounds were suspended, the Commission directed the Licensing Board to defer consideration of that issue in the Consumers Power proceeding. CLI-76-19, NRCI-76/11, 474 (November 5, 1976). However, after the interim rule was adopted, the issue was revived, but the Licensing Board, rather than the Appeal Board, was directed to consider the issue. ALAB-396, NRCI-77/5 (May 4, 1977).

[5] ALAB-395 NRCI-77/4—(April 29, 1977). The Commission had delegated the function of acting on the request to the Appeal Board.

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SUMMARY OF ARGUMENT

I

The Congress, by the Atomic Energy Act of 1954, established a policy of encouraging the development and utilization of atomic energy for peaceful purposes, including the generation of electricity. At the same time, the Congress, recognizing the hazards, mandated the most careful consideration of such projects, as is apparent from the record in the present case. Safety and health considerations were examined in an elaborate safety analysis submitted with Consumers' application, which was reviewed both by the staff of the Commission and by an independent Advisory Committee, all subject to scrutiny by way of public hearings. Environmental issues were examined in an elaborate report by Consumers, followed by a draft environmental statement by the staff and, when comments on the draft had been solicited and considered, by a final environmental statement, again, all subjected to scrutiny by way of further public hearings. Moreover, the lengthy and detailed findings and conclusions of the Licensing Board, before which the hearings were held, were reviewed and approved by an Appeal Board, also in a lengthy and detailed set of opinions. And finally, the Commission itself, on a motion by intervenors to reopen the hearings, dealt extensively with the issues relating to energy conservation.

Decisions so reached should not be lightly set aside, particularly where, as here, the court below appears to have disagreed with judgments the Commission was authorized to make, and to have reached out for issues justifying a remand for further extensive proceedings. This should not be sanctioned by this Court.

II

A. The first such issue, as to which the court below found the Commission to have been "capricious and arbitrary," related to its treatment of "energy conservation" as an alternative under NEPA, §§ 102(C)(iii) and 102(D). On the contrary, the need for the power to be generated by the proposed plant was elaborately established. Intervenor's contentions, later characterized as relating to energy conservation, were in part answered in the initial decision of the Licensing Board and later, in response to intervenor's motion for clarification, by an extensive and detailed opinion by the Commission itself. The court below was not warranted in criticizing the Commission's position that workable rules for developing an adequate record on an energy conservation issue—"a novel and developing concept"—imposed responsibilities not only on the Commission but on the intervenors as well—"They must state clear and reasonably specific energy conservation contentions in a timely fashion." "Energy conservation," as the Commission pointed out, has a "deceptively simple ring" but in fact "suggests a virtually limitless merger of possible actions." In this proceeding, intervenors' contentions were fairly and adequately dealt with.

B. Moreover, the court below, in dealing with this issue, improperly construes NEPA as imposing strict procedural requirements on an agency in response to comments on a draft environmental impact statement. All that is required is that an agency deal with comments in a rational and responsible manner, as the Commission did here. Indeed, when the draft and final statements in this proceeding were proposed, the CEQ

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guidelines did not even require draft statements; NEPA contains nothing about "energy conservation," and it was not until well after the NEPA hearings in this case had been concluded that the CEQ guidelines for the first time indicated that impact statements should consider "alternatives that will significantly conserve energy."

III

The second issue which the court below held required a remand relates to the alleged inadequacy of the report of the Advisory Committee on Reactor Safeguards, in that it cross-referenced its treatment of some issues to "previous ACRS reports." The issue is almost a contrived one, since intervenors' major argument below was that they had wrongfully been denied discovery by way of interrogatories and depositions addressed to individual members of the Advisory Board as to the basis for their safety conclusions. The "previous ACRS reports" were of course fully available in the Commission's Public Document Rooms. In any event, since the Advisory Committee report is not evidence, but indicates only that at an early stage an expert committee has had the opportunity to advise the Commission and its staff, it is judicial intervention run riot to declare, years after the event, that the Licensing Board made a fatal error requiring remand because it did not, *sua sponte,* send the report of the Advisory Board back to it for further explication.

IV

The "fuel cycle" issue—the third issue which the court below held required a remand—which was de-

cided in the *Vermont Yankee* proceeding and incorporated in the *Consumers* proceeding by reference, will be dealt with fully in the *Vermont Yankee* brief. We believe, however, that the Commission has dealt properly with the issue by dealing, at the hearings, with the environmental aspects involved in the transportation of fresh fuel to, and spent fuel from, Consumers' plant, transportation of packaged radioactive materials to low-level burying grounds, and the environmental effects associated with handling fuel at the site, and by dealing with generic rule-making with nuclear reprocessing and waste storage and disposal. Nor was the Commission "capricious and arbitrary" in its rule-making proceeding, even if it be assumed that environmental aspects of reprocessing and waste management are proper considerations in licensing nuclear power plants rather than proper for consideration in licensing reprocessing and waste management facilities themselves. The rule-making proceeding which the Commission conducted was conducted pursuant 5 U.S.C. §553—which is applicable to the Commission. It afforded full opportunity to participants to review the staff report on which the proposed rule was based, to make oral statements as well as written submissions, and full opportunity to present testimony. The holding of the court below that a more "sensitive" procedure was required cannot be reconciled with the decisions of this Court. Intervenors' sole request for additional documents was honored, and their general requests for opportunity to cross-examine were inadequate to require procedures exceeding the statutory requirements.

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V

The final comment of the court below, that since the proceeding is to be remanded, the Commission is to reexamine the changed circumstances regarding the need for process steam and electric power from the proposed facility by The Dow Chemical Company, need not concern the Court in the event the Commission's order is otherwise valid. In fact, on an intervenor's motion, the Commission has already made one such reexamination. It is empowered to do so again, on motion or *sua sponte,* if the occasion demands.

ARGUMENT

I

By the Atomic Energy Act of 1954 Congress established a policy of encouraging the development and utilization of atomic energy for peaceful purposes, including the generation of electricity. By Section 1 of the Act:

> "It is declared to be the policy of the United States that—
>
> (a) the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare."

And by Section 3 of the Act, it is declared to be the "purpose" of Congress to provide:

> "(d) a program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and with the health and safety of the public."

Among the "peaceful purposes" envisioned by Congress was, of course, the utilization of atomic energy for the generation of electricity. See S. Rep. No. 1699, 83d Cong., 2d Sess. p. 3 (1954); H. Rep. No. 2181, 83d Cong., 2d Sess., p. 3 (1954).

The Act also recognized that generation of energy by means of nuclear reactors presents serious potential hazards, as well as benefits. Responsive to that concern, the Act mandates the most careful consideration of any proposal to build and operate a nuclear reactor. Indeed, the Act, and the procedures of the (now) Nuclear Regulatory Commission implementing both the Act and the National Environmental Policy Act (NEPA) provide what must be the most elaborate, detailed and comprehensive administrative machinery ever devised for determining appropriate governmental action. It is into this process that the court below, misconstruing both the relevant statutes and the decisions of this Court, has improperly injected itself.

The Statement, *supra,* indicates the comprehensive nature of the procedures necessary under the statutes and regulations for even a construction permit. Before Consumers' application was even submitted to the Commission, the Act required (§ 185, 42 U.S.C. § 2235) the preparation of a Preliminary Safety Analysis Report—in the present case, this Report was over 2,000 pages in length (R. 1-2261). Then, when the application was submitted, regulations promulgated by the Commission (10 C.F.R. §§ 2.101, 2.102) required that the Report be reviewed by the Commission staff—dozens of specialists, consultants to the Commission, and persons in other government departments and agencies with expertise in specialized areas. In

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the present case the staff sought and obtained further information from Consumers and numerous amendments and additions to the Report were made. *See* Staff Safety Evaluation, R.2606 *et seq.* In addition, the Act required (§§ 29, 182b, 42 U.S.C. § 2039, 2232 (b)) that the Preliminary Safety Analysis Report be reviewed and evaluated by an independent Advisory Committee of 15 consultants that had been established by Congress to advise the Commission on safety matters. This was done, and the Advisory Committee issued, first, a report concluding that the two nuclear reactors proposed "can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public" (R. 2616), and, later, a supplemental report reaffirming that conclusion (R. 2618).

The work of the company, of the staff and of the Advisory Committee was then subjected to scrutiny in public hearings. Consumers, Dow (R. 4829) and the staff (R. 9121-9167, 9715-9721) have each answered interrogatories propounded by intervenor Saginaw (Consumers' answers ran to some 700 pages, R. 5588-6408), and the Preliminary Safety Analysis Report, the Staff Safety Evaluation, including the material on which it had relied, the Advisory Committee reports, and all documents in the Commission's Public Document Room were available to all interested parties. These health and safety hearings lasted 17 days.

The examination of environmental issues happened in this case to take a somewhat different route, but an equally detailed and exhaustive evaluation was conducted. Because the Commission was required to issue new NEPA regulations after the decision in *Calvert*

Cliffs Coordinating Committee v. *Atomic Energy Commission*, 449 F.2d 1109 (D.C. Cir. 1971), the NEPA issues were initially considered after the health and safety hearings had been concluded.[8] Pursuant to these regulations, Consumers filed a 1,600-page report supplementing its filing under the old regulations. In response to inquiries from the staff when it examined the supplemental report, additions and amendments were made (R. 12,612; 15,697; 16,044; 16,293). Then, as with the Preliminary Safety Analysis Report, the staff conducted its own evaluation and filed its own Draft Environmental Statement for public comment (R. 16,152). When comments had been received—from both government agencies and the public—the staff released its Final Environmental Statement (R. 17,355), as well as all the comments it had received. Then, as with the health and safety issues, the staff's conclusions were tested in 14 days of public hearings.

The hearings on both sets of issues were held before an Atomic Safety and Licensing Board created pursuant to § 191 of the Act (42 U.S.C. § 2241). The Licensing Board's lengthy decision on both health and safety and environmental matters (Joint App. pp. 184-222) dealt with every issue of fact on which the intervenors had introduced evidence or engaged in cross-examination. On environmental issues, the Licensing Board recognized that it had the responsibility to "independently consider the final balance among conflicting environmental factors in the record"

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[8] There has been no suggestion in this proceeding that the Commission's NEPA regulations (10 C.F.R. Part 51) are in any way inadequate. Indeed, they have been commended as a model for other agencies. *See Green County Planning Board* v. *Federal Power Commission*, 455 F.2d 412, 422 (2d Cir. 1972).

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(Joint App. p. 205).[7] Its decision did in fact condition its order authorizing the issuance to Consumers of construction permits on certain changes in the plant and the imposition of responsibility on Consumers for certain environmental studies (Joint App. pp. 184-222).

The Commission's procedure provides an appellate review of the decision of the Licensing Board by an Atomic Safety and Licensing Appeal Board. 10 C.F.R. §§ 2.762, 2.765. Each of the intervenor's exceptions to the Licensing Board's decision was reviewed, and in three extensive opinions by the Appeal Board, the decision of the Licensing Board was affirmed (Joint App. pp. 223-321). The Commission did not review or amend the actions of the Appeal Board, and its decision became the final decision of the Commission, 10 C.F.R. §§ 2.760, 2.786. Later, however, as a result of an intervenor's motion to reopen the hearings, the Commission itself did deal in an extensive and detailed opinion with the exceptions relating to energy conservation—one of the issues raised by the intervenors and pressed in the court below (Joint App. pp. 324-345).

Administrative decisions so reached should be set aside only for substantial procedural or substantive

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[7] The Licensing Board noted (Joint App. p. 190) that because the intervenors had failed to comply with the Commission's regulations with respect to proposed findings and conclusions, they had "greatly complicated" the Board's work. However, rather than deal with this default by striking their intervention and treating Consumers' application as uncontested, the Board, as indicated, treated as contested fact issues all those on which the intervenors had introduced affirmative testimony or engaged in cross-examination.

reasons. *Consolo* v. *Federal Maritime Commission*, 383 U.S. 607, 620. Those reasons are lacking here. Rather, the court below appears to have disagreed with the judgment that the Commission is authorized to make, and to have reached out for, and in one instance virtually contrived, issues to justify remanding the proceedings for further extensive hearings and new decisions. This should not be sanctioned by this Court. *Federal Power Commission* v. *Florida Power & Light Co.*, 404 U.S. 453, 466.

We turn, then, to those issues.

II

THE COMMISSION PROPERLY AND ADEQUATELY DEALT WITH THE ENERGY CONSERVATION ISSUE

NEPA requires that an environmental impact statement consider "alternatives to the proposed action." §§ 102(C)(iii) and 102(D), 42 U.S.C. §§ 4332(C)(iii), 4332(D). The court below concluded that the Commission was "capricious and arbitrary" in its treatment of "energy conservation" as an alternative, and that a remand for further consideration of that matter was required. The court's conclusion was wholly unjustified.

A. The Commission Dealt Properly With the Energy Conservation Issue.

The need for the electric power to be generated at the Midland plant was extensively considered. The environmental report prepared by Consumers contained an analysis of projected need broken down by customer classes and uses, and as to some large industries by individual customers (R. 12,612; updated R. 15,697; 16,044; 16,293). Those estimates were of course

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reviewed by the Commission staff, which in preparing the Commission Draft Environmental Statement consulted with agencies "with jurisdiction by law or special expertise with respect to" environmental impact (42 U.S.C. §4332)—the Environmental Protection Agency (R. 16,285, 17,358, 17,516, 17,572) and the agencies having regulatory authority over electric utilities. These included the Michigan Public Service Commission, which regulates all of Consumers retail sales of electricity and must approve the issuance of its securities (Mich. Stat. Ann. Title 22, §§13(6), 101); and the Federal Power Commission, which regulates sales in interstate commerce (16 U.S.C. §824, *et seq.*). None suggested that the demands for energy intended to be met by the Midland plant could be reduced by "energy conservation" measures. In fact, at the hearing a witness from the Federal Power Commission agreed with Consumers' projections of need. (Joint App. p. 207).

At the hearing before the Licensing Board intervenor Saginaw submitted a Statement of Environmental Contentions—119 in number (Joint App. pp. 1340-1396). Of these, some 17 were subsequently alleged to relate to "energy conservation," although that phrase nowhere appears in the intervenor's Statement. The Licensing Board dealt with some of the 17 on the merits. Contentions 31, 47, 75 and 76 asserted in various ways that it was appropriate to determine whether Consumers had artificially enhanced electric demand by promotional advertising or other promotional activities (Joint App. pp. 1356-1357, 1366-1367, 1379-1380). The intervenor offered no evidence to sustain the contentions, and on the record the Licensing Board found that "postulated demand is made up of normal industrial and residential use" (Joint App.

p. 207). Another contention (No. 88, last sentence) raised the question whether the projections of use considered the possibility that the rate structure might be revised to make large uses of electricity more expensive (Joint App. p. 1384). No evidence was offered by intervenor on the issue, and the Board found that Consumers' "projections of need are reasonable" (Joint App. p. 207).

The criticism by the court below is, however, directed not at these rulings, but at the decision by the Licensing Board to decline to consider "whether an appropriate alternative to satisfying the demand [presented by Consumers' analysis] would be to set limits on particular uses of electricity" (Joint App. p. 207). The Licensing Board concluded that "[I]t is, in our view, beyond our province to inquire into whether the customary uses being made of electricity in our society are 'proper' or 'improper'" (*ibid.*). The Appeal Board reviewed the ruling, and agreed (Joint App. p. 306).

The propriety of this aspect of the Licensing Board decision was again raised in a motion for "clarification" filed by intervenor Saginaw while the proceeding was awaiting argument in the court below. The occasion was the decision by the Commission in *Niagara Mohawk Power Company*, 6 A.E.C. 995 (1973), in which the Commission had dealt for the first time with the relevance in licensing proceedings of "energy conservation" issues, and issued a ruling which, recognizing that unresolved legal problems were presented, concluded that such issues should not be excluded from the proceedings. In response to the Saginaw motion, which the Appeal Board referred to the Commission

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itself for disposition, the Commission reviewed in detail each of Saginaw's contentions which might be said to deal with "energy conservation." As to many of them, it found, as already noted, that the Board had entertained and properly disposed of the issues raised. As to other contentions—the contentions as to which the court below found the Commission "capricious and arbitrary"—the Commission made several answers.

First, it dealt with the contention that the Licensing Board should have considered the environmental effects of the customers' electric energy usage. Contention 34, for example, asserted that The Dow Chemical Company, which will receive electricity from Consumers integrated electric system and process steam from the Midland plant, produces certain products which may be harmful to the environment, and that the proceeding must consider the social value of the end uses of the power to be produced. That argument, it concluded, was not a legitimate "energy conservation" issue—Dow would presumably replace any product produced at its plant which was discontinued for environmental reasons with another product and its energy requirements would not be affected (Joint App. p. 338). Moreover, "prediction of the environmental effects of the uses of electricity is highly speculative" (Joint App. p. 338). The Licensing Board, it concluded, was not required "to entertain contentions concerning alleged environmental effects of customer uses of electricity" (Joint App. p. 339)—although it noted that the Board has invited Saginaw to recast its contentions of this character into more specific terms, which Saginaw declined to do. (*Ibid.*)

Second, the Commission found several contentions too vague, as stated, to raise an issue—Contention 32,

for example: "the possibility of changing the present social stimuli to society which could result in decreased demand for electricity"; Contention 33: "to investigate ways of generating electricity through conventional means or other means not now known to man which could result in less risks and costs than the generation of electricity through nuclear power plants." (Joint App. pp. 337, 340). Saginaw, it noted, had declined the invitation by the Licensing Board to make more specific submissions.

Third, it dealt with the criticism by Saginaw of the latter's failure to comply with the Commission's procedural rules. Saginaw had not participated at all in the fourteen days of hearings before the Licensing Board on environmental issues, and in addition, when directed by the Licensing Board to file proposed findings of fact and conclusions of law, Saginaw stated that it had "no conventional findings of fact to set forth." As the Commission stated (Joint App. p. 342), "Saginaw's complaint that it was not granted a hearing on alleged energy conservation issues comes with ill grace."

The court below was particularly critical of the Commission's response to Saginaw's argument that its defaults and failures were irrelevant because the Licensing Board was required to consider all environmental issues, whether contested or not. The criticism is entirely unwarranted. The Commission recognized its duty to develop an adequate record upon which to assess environmental impact. It further concluded, however, that workable subsidiary rules for the orderly conduct of proceedings (Joint App. p. 344)—

> "must take into account that energy conservation is a novel and evolving concept. NEPA 'does not

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> require a "crystal ball" inquiry.' *Natural Resources Defense Council* v. *Morton*, supra. at 837. This consideration has led us to hold that we will not apply *Niagara* retroactively. As we gain experience on a case-by-case basis and hopefully, feasible energy conservation techniques emerge, the applicant, staff, and licensing boards will have obligations to develop an adequate record on these issues in appropriate cases, whether or not they are raised by intervenors.
>
> "However, at this emergent stage of energy conservation principles, intervenors also have their responsibilities. They must state clear and reasonably specific energy conservation contentions in a timely fashion. Beyond that, they have a burden of coming forward with some affirmative showing if they wish to have these novel contentions explored further." (Footnotes omitted)

As to what that "affirmative showing" must be, the Commission added, in a footnote (Joint App. p. 344):

> "[27] We do not equate this burden with the civil litigation concept of a *prima facie* case, an unduly heavy burden in this setting. But the showing should be sufficient to require reasonable minds to inquire further. Compare *United Church of Christ* v. *FCC, supra.*"

For the court below to characterize this as essentially requiring intervenors "to prove an alternative satisfies the 'rule of reason' before the Commission will investigate it" (Joint App. p. 100) is a distortion. To characterize it as "capricious and arbitrary" is to deprive those words of meaning. The court below, without discussion of the nature of Saginaw's contentions and treating them all together as an "energy conservation" issue, likewise treated them all as summarily

rejected, which of course was not the case.[8] Similarly, its criticism of what it termed the Commission's "threshold test" took no account of the nature of Saginaw's contentions, nor indeed that the Commission had satisfied even what the court required (Joint App. p. 101), that "the Commission must explain the basis for each conclusion that further consideration of a suggested alternative is unwarranted." The long, careful opinion by the Commission on Saginaw's motion for clarification (Joint App. pp. 324-345) is a model of just such an explanation as the court appears to demand. We commend it to the Court. The opinion does not, as the court below states, obscure discussion of energy conservation issues by "conflating" them with more exotic "end product" arguments later abandoned (Joint App. p. 96, n.8). To the contrary, energy conservation is defined as including any "measure to curtail the demand for electricity to a level at which the proposed facility would not be needed."[9]

"Energy conservation" is not the simplistic issue of the court below. The Commission pointed out that "the phrase 'energy conservation' has a deceptively simple ring" and taken literally "suggests a virtually limitless merger of possible actions and developments" (Joint App. p. 331).[10] Hence, recognizing that precise

[8] The court below stated: "The Licensing Board rejected energy conservation alternatives as 'beyond our province. . . .' On administrative appeal, the Licensing Board's decision not to explore conservation alternatives was affirmed." (Joint App. pp. 94-95).

[9] The court below appears to suggest that this meant that the Commission would consider only evidence which would "*totally* alleviate the need for . . ." the facility (Joint App. p. 98, n. 10; emphasis in original). However, a review of the Commission's opinion shows that no evidence relating to energy conservation as defined was barred because of its limited impact.

[10] The Federal Power Commission has similarly noted, in its

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guidelines governing what kinds of energy conservation issues should be opened in individual licensing proceedings were neither possible nor desirable, it stated basic considerations which it would apply (Joint App. p. 332):

> "Purported energy conservation issues must meet a threshold test—they must relate to some action, methods or developments that would, in their aggregate effect, curtail demand for electricity to a level at which the proposed facility would not be needed. As discussed hereafter, several of Saginaw's alleged 'energy conservation' issues have nothing to do with projected demand. Beyond that, the issue must pertain to an alternative that is 'reasonably available.' *Natural Resources Defense Council* v. *Morton*, 458 F.2d 827, 834 (C.A. D.C. 1972). Furthermore, the impact of proposed demand must be susceptible to a reasonable degree of proof. Largely speculative and remote possibilities need not be weighed against a convincing projection of demand. Here, as with many other issues under the National Environmental Policy Act of 1969, a rule of reason applies. *See Natural Resources Defense Council* v. *Morton, supra.*" (Footnote omitted)

Moreover, as the subsequent review of the hearing record by the Commission shows, the contentions belatedly characterized as "energy conservation" comments were "long on rhetoric and short on specificity," "redundant," raised "multiple and unrelated issues" and "did not point up any such common themes." Joint App. pp. 333. The contentions were not simply

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initial effort to deal with energy conservation, that "conservation of energy is currently an evolving concept without a uniformly accepted definition." See 38 Fed. Reg. 31,963; 31,964 (Nov. 13, 1973).

written comments to which the agency reacted in writing; they were, on the contrary, made in the context of a full hearing to which intervenors were parties. Indeed, the Licensing Board, in an attempt to deal with the problem, invited the Saginaw intervenors to recast or brief their contentions (R. 25,317; 25,320-322). Saginaw not only failed to do so, it failed even to appear at the fourteen days of hearings on environmental matters. Accordingly, the Licensing Board and the Appeal Board attempted to divide the contentions into groups and so deal with them, except where it was necessary to refer to specific contentions. The Commission later handled the matter in the same way (Joint App. pp. 334-341).

Consequently, what the record shows is not that the energy conservation comments were ignored or that they were deliberately "conflated" with other comments in order to slough them off or that the agency unduly burdened intervenors with its own duties. To the contrary, to a large extent the history of this proceeding is an effort by successive organs of the agency to identify, understand and grapple with a "diffuse barrage" (Joint App. p. 334).

B. The Court Below Seriously Misconstrues What Was Required by NEPA in These Proceedings

The holding of the court below that the intervenors' comments were not adequately addressed turned in large part on its view of the procedure it believes NEPA imposes on an agency when it receives comments on a draft environmental impact statement. NEPA refers only to the "final impact statement, for no other kind of statement is mentioned in the statute." *Aberdeen & Rockfish R. Co.* v. *SCRAP*, 422

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U.S. 289, 320. And the only requirement that NEPA does impose upon agencies before issuing that final impact statement is to consult federal agencies with "jurisdiction by law or special expertise." (42 U.S.C., § 4332(2)(C)). Accordingly, it is wholly inappropriate to hold that NEPA mandates, with the precision of a procedural code, three precisely defined steps which must be followed after a *draft* statement is issued."

Moreover, the holding is particularly inappropriate in the present case. At the time the draft and final environmental impact statements were prepared in this proceeding the Guidelines for Federal Agencies under the National Environmental Policy Act (CEQ Guidelines) did not even require the preparation of draft statements.[12] (36 Fed. Reg. 7724, April 23, 1971).

We recognize that NEPA requires that environmental impacts and effects be considered when an impact statement is prepared, and we do not suggest that an agency is free to ignore material, comprehensible and

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[11] These are (i) a preliminary investigation of any "colorable alternative" contained in an intervenor's comments on a draft environmental statement;" (ii) "a rational judgment as to whether it is worthy of detailed consideration in the . . . [final] EIS;" and (iii) an explicit explanation of "the basis for each conclusion that further consideration of a suggested alternative is unwarranted." Joint App. p. 100-102.

[12] The CEQ Guidelines then in effect contemplated that some agencies would use draft statements and contained provisions relating to the use of such draft statements (Sections 7, 10(e)) and for forwarding copies to the CEQ "when prepared" (Section 10 (b)). However, they contained no provision similar to Section 1500.7(a) of the guidelines subsequently adopted and now in effect, which specify that: "Each environmental impact statement should be prepared and circulated in draft form for comment. . . ." (38 Fed. Reg. 20,550, 20,552, August 1, 1973)

timely comments or information concerning such matters. However, neither NEPA itself nor the CEQ Guidelines prescribe a ritual which must be followed by an agency in reacting to such comments or information. If in fact an agency deals with comments in a rational and responsible manner that is all that is required. The Commission and its subordinate arms did so in this proceeding. (See pp. 23 to 26, *supra*.)

The court below also erred in criticizing the statement by the Commission that it would not apply its *Niagara Mohawk* decision "retroactively to cases which had progressed to final order and issuance of construction permits before *Niagara* was decided" (Joint App. p. 337).[11] The court below admitted that "agencies sometimes apply changes in their discretionary interpretations of their governing statutes only prospectively in order to avoid unfairness" but NEPA, it concluded, required a contrary result (Joint App. p. 98, n.9):

> "But that power cannot be stretched to permit disavowal of clear obligations a statute such as NEPA imposes on the agency itself. The Commission had no power to dispense with such consideration of energy conservation as NEPA required as of the time it was enacted in 1969, at least in those cases where the issue had been raised."

NEPA, of course, contains nothing about energy conservation. It is a "vaguely worded statute" which "can hardly be termed precise." *Kleppe* v. *Sierra Club*,

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[11] The statement was *obiter* only, since the Commission noted that the decision of the Licensing Board on the issue raised was consistent with the *Niagara Mohawk* decision (*ibid.*). The statement by the court below to the contrary is erroneous (Joint App. pp. 336-337).

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427 U.S. 390, 421 (Marshall, J., concurring and dissenting). "[T]he general substantive policy of the Act is a flexible one. It leaves room for a responsible exercise of discretion and may not require particular substantive results in particular problematic instances." *Calvert Cliffs*, 449 F.2d, *supra* at 1112. It is singularly inappropriate to refer to energy conservation as a requirement of NEPA "as of the time it was enacted in 1969" or to the Act's "clear obligations" respecting energy conservation.

Nor can such "clear obligations" be found in other customary sources of interpreting NEPA. The court below noted that on June 19, 1973, the Federal Power Commission required energy conservation to be considered in applications to build hydroelectric facilities. 18 C.F.R. App. A. §8.2 (1975), 38 Fed. Reg. 15,946, 15,949 (June 19, 1973)." This was over a year and one-half after the draft environmental statement for Midland had been completed, fifteen months after the final environmental statement, and more than a year after the Midland hearing had ended. Of course, the FPC regulation was not made retroactive. 38 Fed. Reg. 15,946. If anything, this is an example of the developmental nature of NEPA rather than a requirement to consider energy conservation "as of the time it was enacted in 1969." This is also demonstrated by the fact that the CEQ Guidelines (36 Fed. Reg. 7724, April 23, 1971) in effect when the Midland FES and hearing were completed did not refer to energy conservation.

" The only other "authority" cited by the court below to support its interpretation of NEPA was the *1976* report of the 15th American Assembly on Nuclear Energy which concluded that more efficient conservation of energy could reduce power demand to some extent in the future. (Joint App. p. 102, n.15)

Section 1500.8(a)(4) of the Guidelines subsequently adopted (38 Fed. Reg. 20,550, 20,554, August 1, 1973) for the first time indicated that impact statements should consider "alternatives that will significantly conserve energy." However, this requirement was made applicable to "draft and final impact statements filed with the Council after January 28, *1974*." 38 Fed. Reg., *supra* at 20,557; 38 Fed. Reg. 21,265, August 7, 1973. The Council itself characterized this reference to energy conservation as one of the "major changes" between the 1973 and the previous, 1971, Guidelines.[13]

It is appropriate to add that NEPA is less "demanding" in a case such as the present one, where what is before the Commission is a proposal for private action where the only "major federal action" to be taken is approval or disapproval of that private action. *Kleppe* v. *Sierra, supra* at p. 419, n.1 (Marshall, J., concurring and dissenting). Finally, it makes no sense whatever to apply a rigid rule requiring retroactive application of Commission decisions in what the Commission accurately characterized as a "novel and evolving" area where the Commission recognized that it would act more affirmatively "as we gain experience on a case-by-case basis" and "as feasible energy techniques emerge" (Joint App. p. 344).

We respectfully submit that the court below erred in remanding the proceeding to the Commission for further proceedings on this issue.

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[13] See August 2, 1973 Memorandum for Heads of Agencies issued by the CEQ and entitled "Revision of Agency Procedure for Preparation of Environmental Impact Statements, Attachment A, entitled "Major Changes Between New CEQ Revised NEPA Guidelines and Previous April, 1971 Guidelines on the Preparation of Environmental Impact Statements," p. 2, para. 6, App. p. A-80.

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III

THE REMAND ON THE ACRS ISSUE WAS ERRONEOUS

The Advisory Committee on Reactor Safeguards is established by § 182(b) of the Act (42 U.S.C. § 2232 (b)). The Committee consists of a group of independent, outside experts which is required to review each application for a construction or operating license to determine whether it can be operated with a reasonable assurance of safety. As indicated above, the Advisory Committee reviewed Consumers' initial application, and its two reports were made a part of the public record (R. 2616, 2618).

The issue as to the Advisory Committee arises from the holding by the court below that its reports were inadequate, that the Licensing Board should have, *sua sponte*, returned them to the Advisory Committee for further elaboration (Joint App. p. 108), and that since the Licensing Board had failed to do so the matter must be remanded to the Commission for further proceedings (Joint App. p. 109).

The inadequacy, in the judgment of the court below, is that the Advisory Committee, at the conclusion of a five-page report discussing a variety of design problems and suggestions for modifications in Consumers' plans, concludes (Joint App. pp. 105-106):

> "Other problems related to large water reactors have been identified by the Regulatory Staff and the ACRS and cited in previous ACRS reports. The Committee believes that resolution of these items should apply equally to the Midland Plant Units 1 & 2.
>
> "The Committee believes that the above items can be resolved during construction and that, if due consideration is given to these items, the nu-

> clear units proposed for the Midland Plant can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public."

It is fair to say that this issue is almost entirely contrived by the court below. The opinion below, after referring to the "other problems" sentence just quoted, recites that "Saginaw requested the Licensing Board to permit discovery into these matters." That statement is grossly misleading. Saginaw's discovery requests took the form of 337 interrogatories, various document demands, subpoenas and requests for depositions directed to Advisory Committee members (Joint App. p. 106). The fact is, however, that this elaborate attempt was not an attempt to discover "into these matters." The Saginaw request did not plead ignorance of, or the availability of, information as to the "other issues." Indeed, since all of the Advisory Committee's reports are publicly available at the Commission's Public Document Room, there would have been no basis for such a complaint. Intervenor Saginaw directed its discovery efforts to quite a different object —to find the basis upon which the Advisory Committee had reached its five pages of conclusions and suggestions. As the brief for the intervenors on this issue in the court below stated (p. 17): "petitioners' requests [for discovery] focused not only upon ACRS views which had been communicated to the Staff, but also upon the ACRS reasoning process—communicated or otherwise—underlying its conclusions." *That* demand —for discovery into the reasoning process of the Committee—was properly denied by the court below (Joint App. pp. 108-109).

But contrived or not, there is no warrant for the holding below that the "other problems" referenced in

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the Advisory Committee's report required the Licensing Board to reject it. There is even less warrant for the holding that seven years later the reference in the report required a remand of the case to the Commission for further proceedings. The Act requires that the Advisory Committee prepare a report, and that it be made public.[16] That was done. Under the Act, the report is not evidence; it indicates, rather, that at an early stage in the proceedings an expert committee has had the opportunity to examine the proposed facility and advise the Commission and its staff. Neither the Licensing Board nor the Appeal Board relied upon the Advisory Committee reports as evidence. The Licensing Board stated (Joint App. p. 186 n.2) that they "were admitted into the record . . . as required by law (42 U.S.C. 2282(b)) for the sole purpose of showing compliance with the statute and not as evidence of the truth of any statement therein." The Appeal Board agreed (Joint App. p. 277). To declare, years later, that the Licensing Board made a fatal error in failing, *sua sponte*, to send the Advisory Committee reports back to the Committee for explication of the "other problems" is judicial intervention run riot.

Perhaps it is fair to add that, whatever may be the disposition of this cause by this Court, Advisory Committee reports will, in the findings, not be likely to contain cross-references to unidentified earlier reports. To say that, however, is in no sense to justify what the court below has done. Judicial condemnation of a long and meticulous administrative proceeding because of

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[16] The court below in its remand order has added a gloss to the Act—that the Advisory Committee couch its further report in words "understandable to a layman" (Joint App. p. 108). In the context of nuclear technology, such a mandate becomes only a source of controversy—what kind of a "layman" is referred to?

the alleged substantive inadequacy of a collateral aspect of that proceeding is unconscionable.

IV

THE REMAND IN THE COURT BELOW ON THE "FUEL CYCLE" ISSUE WAS IN ERROR

"Fuel Cycle," in the present context, involves the entire course of events relating to the fuel for a nuclear reactor, beginning with its mining and including its milling, enrichment, fabrication, transportation to the reactor, transportation of spent fuel to a reprocessing facility and disposal of waste. The issue here relates to the latter part of that cycle—whether the Commission properly disposed of the question as to the environmental effects of the reprocessing of spent fuel and the disposition of wastes which would be involved in the operation of the Midland project. While the brief for Vermont Yankee will deal at length with this issue, it is appropriate that we also set forth the reasons for our belief that the Commission did adequately and properly deal with the issue, and that the court below erred in remanding the proceeding to the Commission for further consideration.

In the present case, the Licensing Board, in approving Consumers' construction permit in December 1972, concluded that environmental questions relating to the fuel cycle issue need not consider the environmental aspects of the reprocessing of the spent fuel or the ultimate disposition of nuclear wastes, but rather should be confined to the environmental aspects involved in the transportation of fresh fuel to, and spent fuel from, Consumers' plant, transportation of packaged radioactive materials to burying grounds, and the environmental effects associated with handling of fuel

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at the plant site (R. 17,272, 22.406). In May 1973, the Appeal Board affirmed that ruling (Joint App. p. 241). The Appeal Board had earlier reached the same conclusion in the *Vermont Yankee* proceedings (Joint App. p. 115).

Contemporaneously, however, the Commission itself recognized the desirability of dealing with the environmental effects of a nuclear plant in respect to reprocessing and waste storage and disposal. While agreeing with the decisions of the Appeal Board that full exploration of these issues was inappropriate in individual licensing proceedings, it proposed by rulemaking to quantify the environmental consequences of an individual nuclear reactor on this part of the fuel cycle, to the end that the results reached by the rule could then be applied in individual licensing proceedings. A rulemaking proceeding for that purpose was announced in November 1972 (Joint App. p. 352). The result of the proceeding was an amendment to its regulation implementing NEPA (10 C.F.R. Part 50, Appendix D) which quantified and set out in a table (S-3) the environmental effects of an individual reactor in relation to reprocessing and waste disposal. 39 Fed. Reg. 14,188 (April 22, 1974), Joint App. pp. 385-400. The Commission also concluded that because the environmental effects of a single reactor were essentially insignificant, there was no reason to reopen prior cases, including the present one. *See* Joint App. p. 395; *see generally Potomac Electric Power Co.*, 8 A.E.C. 79-85 (1974).

The court below did not take issue with the conclusion of the Commission that consideration of the environmental effects of the reprocessing and waste disposal aspects of the fuel cycle was properly consid-

ered by the Commission to be generic in nature, and more appropriate for rulemaking than for separate examination and evaluation in each individual licensing proceeding. *Cf. Union of Concerned Scientists* v. *AEC*, 499 F.2d 1069 (D.C. Cir. 1974); *Ecology Action* v. *AEC*, 492 F.2d 998, 1002 (2d Cir. 1974). Its decision, rather, was that in the rulemaking proceeding the Commission has been "capricious and arbitrary," that the rule which the Commission had issued was therefore invalid, and that since the court did not accept the decision of the Appeal Board that the environmental effects of reprocessing and waste disposal need not be considered in the licensing hearing, the construction permit to Consumers had not been properly issued. The proceeding was remanded for either a valid rulemaking, or for further consideration in the licensing proceeding itself (Joint App. p. 40, n.17).

For the reasons set forth in the brief for Vermont Yankee (pp. 39-50), we believe that the court below erred in rejecting the decision of the Appeal Board that the environmental effects of whatever might be done with the spent fuel from the Midland rectors was more appropriately to be dealt with—as the Commission was and is dealing with it—in connection with a generic environmental impact statement on various reprocessing and waste management alternatives as they may be considered for licensing by the Commission. *See Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle*, NUREG-0116 (Supplement 1 to WASH-1248, Appendices B and C. *Cf. Kleppe* v. *Sierra Club*, 427 U.S. 390. Approval of the position of the Appeal Board would make the validity *vel non* of the rule promulgating Table S-3 irrelevant. But be that as it

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may, the court below also was in error in finding the Commissions' rulemaking invalid.

Rulemaking by the Commission is governed by 5 U.S.C. § 553. *Siegel* v. *AEC*, 400 F.2d 778, 786 (D.C. Cir. 1968). Section 553 provides for a legislative-type hearing—one that does not require that participants be afforded the right of cross-examination or discovery. *United States* v. *Allegheny-Ludlum Steel Corp.*, 406 U.S. 742; *United States* v. *Florida East Coast Ry. Co.*, 410 U.S. 224; Bauser, *The Development of Rulemaking Within the Atomic Energy Commission: The Nuclear Regulatory Commission's Valuable Legacy*, 27 Ad. Law Rev. 165, 166-170 (1975).

Rulemaking by the Commission involving NEPA problems stands on no different footing than rulemaking involving the many other issues with which it must be concerned. The National Environmental Policy Act (42 U.S.C. § 4332, *et seq.*) does not modify the Administrative Procedure Act, nor in any other way impose requirements for rulemaking which are more stringent. *United States* v. *SCRAP*, 412 U.S. 669, 694. Indeed, it is important to bear in mind, in specifying instances such as the present where rulemaking involves NEPA, that, as this Court has recently affirmed in *Kleppe* v. *Sierra Club*, 427 U.S. 390, 410, n.21:

> "Neither the statute nor its legislative history contemplates that a court should substitute its judgment for that of an agency as to the environmental consequences of its action. . . . The only role for a court is to insure that the agency has taken a 'hard look' at environmental consequences; it cannot 'interject itself into the area of discretion of the executives as to the choice of actions to be taken'".

The decision below invalidating the Commission's rule cannot be squared with § 553, with *SCRAP* or with *Kleppe*. The rulemaking proceeding, as indicated above, was begun with a notice published in the *Federal Register* on November 15, 1972 (37 Fed. Reg. 24,191, Joint App. p. 352) concerning the purpose of the hearing to be held. The notice announced the availability of a staff report "Environmental Survey of the Nuclear Fuel Cycle" which described the methodology and assumptions used by the staff in arriving at its findings, which were set out in tabular form in Table S-3. The notice solicited comments, and stated that it would consider them at a legislative-type hearing. A later notice in the *Federal Register* set up a Hearing Board and provided that participants in the hearing could make oral statements as well as written submissions. 38 Fed. Reg. 49. All interested parties had an opportunity to become parties to the rulemaking proceeding. *Id.* at p. 50.

Weeks before the hearings opened, the Commission made available in its Public Documents Room the background material for the staff Survey, including the staff's administrative and prior drafts. 39 Fed. Reg. 14,188; 14,190-91. The only request for additional documents which the Commission received was promptly honored. See 39 Fed. Reg. 14,189, n.2.

At the hearing, on February 1-2, 1973 (Joint App. pp. 700-1023) testimony was presented by the staff, by the Natural Resources Defense Council (represented at the hearing by Consolidated National Intervenors), and by several other participants, and written comments were received from a large number of individuals and groups. See generally the pre-hearing proceedings, Joint App. pp. 655-699. No testimony or com-

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ment was excluded for any reason. After reviewing the record and other related data available to it, the Commission revised the Survey, revised Table S-3, and issued its Uranium Fuel Cycle Rule, which required that the values set out in Table S-3 be factored into the cost-benefit analysis for all proposed nuclear power plants after June 6, 1974. 39 Fed. Reg. 14,188, 10 C.F.R. § 51.20(e).

The court below found that all of this was not sufficient to "ventilate the issues." While there are overtones in the majority opinion that suggest that the court felt that the evidence adduced at the hearings was not adequate to support the numerical values in Table S-3, the court's "capricious and arbitrary" characterization of the Commission's action appears to have been based on its view that a legislative-type hearing would not suffice, and that a "more sensitive, deliberate" procedure was required (Joint App. pp. 44, 67). The court declined, however, to specify what special procedures, or combinations thereof, would have sufficed.

The decision, we submit, cannot be reconciled with the mandate of § 553, as interpreted by the Court in *Allegheny-Ludlum* and *Florida East Coast, supra.* Indeed, the hearing which was provided, the material which was available, the opportunities which were afforded participants, the supplying of further documents when requested, far exceeded the minimum standard of that section of the APA. Moreover, the court below took no account of the fact that it was dealing with a NEPA rule, which, as indicated above, requires only that the agency involved take a "hard look." To assert that the Commission has not fully met that standard is to close one's eyes to reality.

Moreover, the decision cannot fairly be reconciled even with the earlier decisions of the court below which have indicated that a rulemaking participant may, in certain situations, demand procedures which exceed statutory requirements in order to develop a complete record. *E.g., International Harvester Co.* v. *Ruckelshaus,* 478 F.2d 615 (D.C. Cir. 1973); *American Airlines, Inc.* v. *CAB,* 359 F.2d 624 (D.C. Cir. 1966), *cert. denied,* 385 U.S. 843.[17] However, even under those decisions the objectors must have made "circumscribed and justified requests" for other procedures and must have demonstrated that on "explicit points" the procedure they request is essential. *International Harvester,* 478 F.2d at p. 631. As Professor Davis has noted, "the case law is clear that general requests for opportunity to cross-examine may be denied." *Administrative Law of the Seventies* (Supplemental Administrative Law Treatise) § 6.01-5, p. 191 (1976).

The court below asserted (Joint App. p. 44, n.25) that intervenors here had met that standard. On the contrary, as the court's own footnote reveals, the intervenors' legal brief, to which the court refers, con-

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[17] The attitude of the court below is not shared by other courts of appeal, which have found notices and comments adequate for Section 553 rulemaking. General Telephone Co. v. United States, 449 F.2d 846, 862-863 (5th Cir. 1971); California Citizens Band Ass'n v. United States, 375 F.2d 43, 50 (9th Cir. 1967), *cert. denied,* 389 U.S. 844; Phillips Petroleum Co. v. FPC, 475 F.2d 842 (10th Cir. 1973), *cert. denied sub nom.* Chevron Oil Co. v. FPC, 414 U.S. 1146; Buckeye Power, Inc. v. EPA, 481 F.2d 162, 170-172 (6th Cir. 1973); Duquesne Light Co. v. EPA, 481 F.2d 1, 6-7 (3d Cir. 1973). To the contrary, with the court below, are the Second and Fourth Circuits. See Natural Resources Defense Council v. NRC, 539 F.2d 824 (2d Cir. 1976), petition for certiorari pending No. 76-653; Appalachian Power Co. v. EPA, 477 F.2d 495, 503 (4th Cir. 1973).

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tains only a broad demand for "the right to cross-examine and to have discovery" on the issues, and comments on the testimony of Dr. Pittman, a staff witness on waste disposal issues:

> "We are not satisfied with Mr. Pittman's well intentioned, but, we think, not at all well explained position with regard to the ability to handle nuclear wastes for hundreds of thousands of years."

One may legitimately wonder how cross-examination would permit a "harder look" at what the court below itself recognized as being "basic philosophical issues concerning man's ability to make commitments which will require stable social structures for unprecedented periods." Joint App. p. 63. One may more confidently accept the Commission's own conclusion (39 Fed. Reg. 14,189):

> "All parties were fully heard. Nothing offered was excluded. The record does not indicate that any evidentiary material would have been received under different procedures. Nor did the proponent of the strict 'adjudicatory' approval make an offer of proof—or even remotely suggest—what substantive matters it would have developed under different procedures."

The court below might more appropriately have heeded the admonition it gave to a similiar protest in *American Airlines, Inc.* v. *CAB, supra.* Commenting on the decision of this Court in *United States* v. *Storer Broadcasting Co.*, 351 U.S. 192, the court said (359 F.2d at p. 629):

> "It rests on a fundamental awareness that rule making is a vital part of the administrative process, particularly adapted to and useful for sound

> evolution of policy in guiding the future development of industries subject to intensive administrative regulation in the public interest, and that such rule making is not to be shackled, in the absence of clear and specific Congressional requirement, by importation of formalities developed for the adjudicative process and basically unsuited for policy rule making."

All of this is not to say, of course, that the environmental effects of reprocessing and waste disposal are not important. They are. Nor is it to say that anyone, whatever procedures might be invoked, could arrive at categorical and specific answers to the environmental questions. What it is to say is that the Commission, with what this Court has called "appropriate allowances for the inexactness of all predictive ventures" (*Kleppe* v. *Sierra Club*, 427 U.S. 390, 402, n.14) should not be subject to a second-guess by a court as to whether it had enough information before it to proceed.

V

THE "DOW" ISSUE

A final word is warranted on the comment by the court below that, on remand, "the Commission will take into account the changed circumstances regarding Dow's need for process steam, and the intended continued operation of Dow's fossil-fuel generating facilities" (Joint App. p. 109). The court did not, as urged by intervenors, find that the Commission had erred in its treatment of the Dow-Consumers relationship, and in the event this Court finds the Commission's actions otherwise valid, it need not be concerned with the "Dow" issue.

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For the information of the Court, however, while the appeal in this case was pending in the court below, intervenors moved the Commission to reopen the proceedings because of alleged significant changes in Dow's commitment to take process steam and electric power from the Midland plant. The matter was investigated by the Commission, and three memoranda and orders were issued (Joint App. pp. 346-351). The Commission concluded (Joint App. p. 35):

> "We have carefully reviewed the relevant portions of these contracts and reaffirm our prior determination that there are no 'changed circumstances', as alleged by Saginaw, warranting a reopening of these proceedings. We think it sufficient to note that Dow has a contractural commitment to purchase large quantities of process steam from the completed facility, that substantial purchases of electricity are also contemplated, and that Dow's existing fossil-fueled facilities are to be maintained primarily on a stand-by basis."

The hearings pursuant to the mandate of the court below have dealt further with the Dow relationship, and the Commission itself is of course empowered either *sua sponte* or on motion by a party to again determine whether any modification of its position is warranted.

CONCLUSION

Wherefore, it is respectfully requested that the decision of the court below be reversed, and that the petitions to review the order of the Commission granting construction permits to Consumers for the Midland plant be dismissed.

Respectfully submitted,

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APPENDIX

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APPENDIX

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STATUTES:

Relevant Sections of Atomic Energy Act of 1954, Act of Aug. 30, 1954, Ch. 724, 68 Stat. 921, as amended, 42 U.S.C. §§ 2011 *et seq.* A-2

Relevant Sections of Energy Reorganization Act of 1974, Pub. L. 93-438, Ch. 73, 88 Stat. 1233, as amended, 42 U.S.C. §§ 5801 *et seq.* A-21

Relevant Section of National Environmental Policy Act of 1969, Pub. L. 91-190, 83 Stat. 852, as amended, 42 U.S.C. § 4332 ..... A-25

ADMINISTRATIVE ACTIONS:

Environmental Effects of the Uranium Fuel Cycle, General Statement of Policy, Nuclear Regulatory Commission, Docket RM-50-3, Fed. Reg. Vol. 41, No. 159, Aug. 16, 1976 ..... A-28

Licensing and Regulatory Policy and Procedures for Environmental Protection, Nuclear Regulatory Commission, Fed. Reg. Vol. 41, No. 202, Oct. 18, 1976 (10 CFR Part 51) A-37

Environmental Effects of the Uranium Fuel Cycle, Supplemental General Statement of Policy, Nuclear Regulatory Commission, Fed. Reg. Vol. 41, No. 219, Nov. 11, 1976 ..... A-52

Licensing and Regulatory Policy and Procedures for Environmental Protection, Nuclear Regulatory Commission, Fed. Reg. Vol. 42, No. 49, March 14, 1977 (Title 10 CFR, Ch. 1, Part 51) A-57

Memorandum for Heads of Agencies, on Revision of Agency Procedures for Preparation of Environmental Impact Statements, Council on Environmental Quality, Aug. 2, 1973 ..... A-78

RELEVANT SECTIONS OF ATOMIC ENERGY ACT OF 1954, ACT OF AUG. 30, 1954, CH. 724, 68 STAT. 921, AS AMENDED, 42 U.S.C. §§2011 ET SEQ.

CHAPTER I. DECLARATION, FINDINGS, AND PURPOSE

SECTION 1. DECLARATION.—Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that--

a. the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security; and

b. the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise.

SEC. 2. FINDINGS.—The Congress of the United States hereby makes the following findings concerning the development, use, and control of atomic energy:

a. The development, utilization, and control of atomic energy for military and for all other purposes are vital to the common defense and security.

c. The processing and utilization of source, byproduct, and special nuclear material affect interstate and foreign commerce and must be regulated in the national interest.

d. The processing and utilization of source, byproduct, and special nuclear material must be regulated in the national interest and in order to provide for the common defense and security and to protect the health and safety of the public.

e. Source and special nuclear material, production facilities, and utilization facilities are affected with the pub-

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lic interest, and regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary in the national interest to assure the common defense and security and to protect the health and safety of the public.

f. The necessity for protection against possible interstate damage occurring from the operation of facilities for the production or utilization of source or special nuclear material places the operation of those facilities in interstate commerce for the purposes of this Act.

g. Funds of the United States may be provided for the development and use of atomic energy under conditions which will provide for the common defense and security and promote the general welfare.

i. In order to protect the public and to encourage the development of the atomic energy industry, in the interest of the general welfare and of the common defense and security, the United States may make funds available for a portion of the damages suffered by the public from nuclear incidents, and may limit the liability of those persons liable for such loses.

SEC. 3. PURPOSE.—It is the purpose of this Act to effectuate the policies set forth above by providing for—

a. a program of conducting, assisting, and fostering research and development in order to encourage maximum scientific and industrial progress;

b. a program for the dissemination of unclassified scientific and technical information and for the control, dissemination, and declassification of Restricted Data, subject to appropriate safeguards, so as to encourage scientific and industrial progress;

c. a program for Government control of the possession, use, and production of atomic energy and special nuclear material, whether owned by the Government or others, so

directed as to make the maximum contribution to the common defense and security and the national welfare, and to provide continued assurance of the Government's ability to enter into and enforce agreements with nations or groups for the control of special nuclear materials and atomic weapons.

d. a program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public;

e. a program of international cooperation to promote the common defense and security and to make available to cooperating nations the benefits of peaceful applications of atomic energy as widely as expanding technology and considerations of the common defense and security will permit; and

f. a program of administration which will be consistent with the foregoing policies and programs, with international arrangements, and with agreements for cooperation, which will enable the Congress to be currently informed so as to take further legislative action as may be appropriate.

• • •

CHAPTER II ORGANIZATION

SEC. 26. GENERAL ADVISORY COMMITTEE; COMPOSITION; TENURE; MEETINGS; COMPENSATION.

There shall be a General Advisory Committee to advise the Commission on scientific and technical matters relating to materials, production, and research and development, to be composed of nine members, who shall be appointed from civilian life by the President. Each member shall hold office for a term of six years, except that (a) any mem-

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ber appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed, shall be appointed for the remainder of such term; and (b) the terms of office of the members first taking office after August 1, 1946, shall expire, as designated by the President at the time of appointment, threee at the end of two years, three at the end of four years, and three at the end of six years, after August 1, 1946. The Committee shall designate one of its own members as Chairman. The Committee shall meet at least four times in every calendar year. The members of the Committee shall receive a per diem compensation for each day spent in meetings or conferences, and all members shall receive their necessary traveling or other expenses while engaged in the work of the Committee.

SEC. 29. ADVISORY COMMITTEE ON REACTOR SAFEGUARDS; COMPOSITION; TENURE; DUTIES; COMPENSATION.

There is established an Advisory Committee on Reactor Safeguards consisting of a maximum of fifteen members appointed by the Commission for terms of four years each. The Committee shall review safety studies and facility license applications referred to it and shall make reports thereon, shall advise the Commission with regard to the hazards of proposed or existing reactor facilities and the adequacy of proposed reactor safety standards, and shall perform such other duties as the Commission may request. One member shall be designated by the Committee as its Chairman. The members of the Committee shall receive a per diem compensation for each day spent in meetings or conferences, or other work of the Committee, and all members shall receive their necessary traveling or other expenses while engaged in the work of the Committee. The provisions of section 2203 of this title shall be applicable to the Committee.

CHAPTER IX. ATOMIC ENERGY LICENSES

SEC. 101. LICENSE REQUIRED.—It shall be unlawful, except as provided in section 91, for any person within the United States to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export any utilization or production facility except under and in accordance with a license issued by the Commission pursuant to section 103 or 104.

SEC. 102. UTILIZATION AND PRODUCTION FACILITIES FOR INDUSTRIAL OR COMMERCIAL PURPOSES.—

a. Except as provided in subsections b. and c., or otherwise specifically authorized by law, any license hereafter issued for a utilization or production facility for industrial or commercial purposes shall be issued pursuant to section 103.

b. Any license hereafter issued for a utilization or production facility for industrial or commercial purposes, the construction or operation of which was licensed pursuant to subsection 104 b. prior to enactment into law of this subsection, shall be issued under subsection 104 b.

c. Any license for a utilization or production facility for industrial or commercial purposes constructed or operated under an arrangement with the Commission entered into under the Cooperative Power Reactor Demonstration Program shall, except as otherwise specifically required by applicable law, be issued under subsection 104 b.

SEC. 103. COMMERCIAL LICENSES.—

a. The Commission is authorized to issue licenses to persons applying therefore to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export under the terms of an agreement for cooperation arranged pursuant to section 123, utilization or production facilities for industrial or com-

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mercial purposes. Such licenses shall be issued in accordance with the provisions of chapter 16 and subject to such conditions as the Commission may by rule or regulation establish to effectuate the purposes and provisions of this Act.

b. The Commission shall issue such licenses on a nonexclusive basis to persons applying therefor (1) whose proposed activities will serve a useful purpose proportionate to the quantities of special nuclear material or source material to be utilized; (2) who are equipped to observe and who agree to observe such safety standards to protect health and to minimize danger to life or property as the Commission may by rule establish; and (3) who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine necessary to promote the common defense and security and to protect the health and safety of the public. All such information may be used by the Commission only for the purposes of the common defense and security and to protect the health and safety of the public.

c. Each such license shall be issued for a specified period, as determined by the Commission, depending on the type of activity to be licensed, but not exceeding forty years, and may be renewed upon the expiration of such period.

d. No license under this section may be given to any person for activities which are not under or within the jurisdiction of the United States, except for the export of production or utilization facilities under terms of an agreement for cooperation arranged pursuant to section 123, or except under the provisions of section 109. No license may be issued to an alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be

issued to any person within the United States if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public.

CHAPTER XIII. GENERAL AUTHORITY

SEC. 161. GENERAL PROVISIONS.—In the performance of its functions the Commission is authorized to—

a. establish advisory boards to advise with and make recommendations to the Commission on legislation, policies, administration, research, and other matters, provided that the Commission issues regulations setting forth the scope, procedure, and limitations of the authority of each such board;

b. establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property;

c. make such studies and investigations, obtain such information, and hold such meetings or hearings as the Commission may deem necessary or proper to assist it in exercising authority provided in this Act, or in the administration or enforcement of this Act, or any regulations or orders issued thereunder. For such purposes the Commission is authorized to administer oaths and affirmations, and by subpena to require any person to appear and testify, or to appear and produce documents, or both, at any designated place. Witnesses subpenaed under this subsection shall be paid the same fees and mileage as are paid witnesses in the district courts of the United States;

• • •

f. with the consent of the agency concerned, utilize or employ the services of personnel of any Government agency

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or any State or local government, or voluntary or uncompensated personnel, to perform such functions on its behalf as may appear desirable;

• • •

h. consider in a single application one or more of the activities for which a license is required by this Act, combine in a single license one or more of such activities, and permit the applicant or licensee to incorporate by reference pertinent information already filed with the Commission;

i. prescribe such regulations or orders as it may deem necessary (1) to protect Restricted Data received by any person in connection with any activity authorized pursuant to this Act, (2) to guard against the loss or diversion of any special nuclear material acquired by any person pursuant to section 53 or produced by any person in connection with any activity authorized pursuant to this Act, to prevent any use or disposition thereof which the Commission may determine to be inimical to the common defense and security, including regulations or orders designating activities, involving quantities of special nuclear material which in the opinion of the Commission are important to the common defense and security, that may be conducted only by persons whose character, associations, and loyalty shall have been investigated under standards and specifications established by the Commission and as to whom the Commission shall have determined that permitting each such person to conduct the activity will not be inimical to the common defense and security, and (3) to govern any activity authorized pursuant to this Act, including standards and restrictions governing the design, location and operation of facilities used in the conduct of such activity, in order to protect health and to minimize danger to life or property;".

j. without regard to the provisions of the Federal Property and Administrative Services Act of 1949, as amended, except section 207 of that Act, or any other law, make such

disposition as it may deem desirable of (1) radioactive materials, and (2) any other property, the special disposition of which is, in the opinion of the Commission, in the interest of the national security: *Provided, however,* That the property furnished to licensees in accordance with the provisions of subsection 161 m. shall not be deemed to be properly disposed of by the Commission pursuant to this subsection;

• • •

o. require by rule, regulation, or order, such reports, and the keeping of such records with respect to, and to provide for such inspections of, activities and studies of types specified in section 31 and of activities under licenses issued pursuant to section 53, 63, 81, 103, and 104, as may be necessary to effectuate the purposes of this Act, including section 105; and

p. make, promulgate, issue, rescind, and amend such rules and regulations as may be necessary to carry out the purposes of this Act.

• • •

CHAPTER XV. JUDICIAL REVIEW AND ADMINISTRATIVE PROCEDURE

SEC. 181. GENERAL.—The provisions of the Administrative Procedure Act (Public Law 404, Seventy-ninth Congress, approved June 11, 1946) shall apply to all agency action taken under this Act, and the terms "agency" and "agency action" shall have the meaning specified in the Administrative Procedure Act: *Provided, however,* That in the case of agency proceedings or actions which involve Restricted Data or defense information, the Commission shall provide by regulation for such parallel procedures as will effectively safeguard and prevent disclosure of Restricted Data or defense information to unauthorized persons with minimum impairment of the procedural rights which would be available if Restricted Data or defense information were not involved.

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SEC. 182. LICENSE APPLICATIONS.—

a. Each application for a license hereunder shall be in writing and shall specifically state such information as the Commission, by rule or regulation, may determine to be necessary to decide such of the technical and financial qualifications of the applicant, the character of the applicant, the citizenship of the applicant, or any other qualifications of the applicant as the Commission may deem appropriate for the license. In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. Such technical specifications shall be a part of any license issued. The Commission may at any time after the filing of the original application, and before the expiration of the license, require further written statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee. Applications for, and statements made in connection with, licenses under sections 103 and 104 shall be made under oath or affirmation. The Commission may require any other applications or statements to be made under oath or affirmation.

b. The Advisory Committee on Reactor Safeguards shall review each application under section 103 or section 104 b. for a construction permit or an operating license for a facility, any application under section 104 c. for a

construction permit or an operating license for a testing facility, any application under section 104 a. or c. specifically referred to it by the Commission, and any application for an amendment to a construction permit or an amendment to an operating license under section 103 or 104 a., b., or c. specifically referred to it by the Commission, and shall submit a report thereon which shall be made part of the record of the application and available to the public except to the extent that security classification prevents disclosure.

c. The Commission shall not issue any license under section 103 for a utilization or production facility for the generation of commercial power until it has given notice in writing to such regulatory agency as may have jurisdiction over the rates and services incident to the proposed activity; until it has published notice of the application in such trade or news publications as the Commission deems appropriate to give reasonable notice to municipalities, private utilities, public bodies, and cooperatives which might have a potential interest in such utilization or production facility; and until it has published notice of such application once each week for four consecutive weeks in the Federal Register, and until four weeks after the last notice.

d. The Commission, in issuing any license for a utilization or production facility for the generation of commercial power under section 103, shall give preferred consideration to applications for such facilities which will be located in high cost power areas in the United States if there are conflicting applications for a limited opportunity for such license. Where such conflicting applications resulting from limited opportunity for such license include those submitted by public or cooperative bodies such applications shall be given preferred consideration.

Sec. 183. Terms of Licenses.—Each license shall be in such form and contain such terms and conditions as the

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Commission may, by rule or regulation, prescribe to effectuate the provisions of the Act, including the following provisions:

b. No right to the special nuclear material shall be conferred by the license except as defined by the license.

c. Neither the license nor any right under the license shall be assigned or otherwise transferred in violation of the provisions of this Act.

d. Every license issued under this Act shall be subject to the right of recapture or control reserved by section 108, and to all of the other provisions of this Act, now or hereafter in effect and to all valid rules and regulations of the Commission.

SEC. 184. INALIENABILITY OF LICENSES. — No license granted hereunder and no right to utilize or produce special nuclear material granted hereby shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of this Act, and shall give its consent in writing. The Commission may give such consent to the creation of a mortgage, pledge, or other lien upon any facility or special nuclear material, owned or thereafter acquired by a licensee, or upon any leasehold or other interest in such facility, and the rights of the creditors so secured may thereafter be enforced by any court subject to rules and regulations established by the Commission to protect public health and safety and promote the common defense and security.

SEC. 185. CONSTRUCTION PERMITS.—All applicants for licenses to construct or modify production or utilization facilities shall, if the application is otherwise acceptable to the Commission, be initially granted a construction permit. The construction permit shall state the earliest and

latest dates for the completion of the construction or modification. Unless the construction or modification of the facility is completed by the completion date, the construction permit shall expire, and all rights thereunder be forfeited, unless upon good cause shown, the Commission extends the completion date. Upon the completion of the construction or modification of the facility, upon the filing of any additional information needed to bring the original application up to date, and upon finding that the facility authorized has been constructed and will operate in conformity with the application as amended and in conformity with the provisions of this Act and of the rules and regulations of the Commission, and in the absence of any good cause being shown to the Commission why the granting of a license would not be in accordance with the provisions of this Act, the Commission shall thereupon issue a license to the applicant. For all other purposes of this Act, a construction permit is deemed to be a "license".

SEC. 186. REVOCATION.—

a. Any license may be revoked for any material false statement in the application or any statement of fact required under section 182, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Commission to refuse to grant a license on an original application, or for failure to construct or operate a facility in accordance with the terms of the construction permit or license or the technical specifications in the application, or for violation of, or failure to observe any of the terms and provisions of this Act or of any regulation of the Commission.

b. The Commission shall follow the provisions of section 9(b) of the Administrative Procedure Act in revoking any license.

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c. Upon revocation of the license, the Commission may immediately retake possession of all special nuclear material held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the health and safety of the public, the Commission may recapture any special nuclear material held by the licensee or may enter upon and operate the facility prior to any of the procedures provided under the Administrative Procedure Act. Just compensation shall be paid for the use of the facility.

SEC. 187. MODIFICATION OF LICENSE.—The terms and conditions of all licenses shall be subject to amendment, revision, or modification, by reason of amendments of this Act, or by reason of rules and regulations issued in accordance with the terms of this Act.

SEC. 188. CONTINUED OPERATION OF FACILITIES.—Whenever the Commission finds that the public convenience and necessity or the production program of the Commission requires continued operation of a production facility or utilization facility the license for which has been revoked pursuant to section 186, the Commission may, after consultation with the appropriate regulatory agency, State or Federal, having jurisdiction, order that possession be taken of and such facility be operated for such period of time as the public convenience and necessity or the production of the Commission may, in the judgment of the Commission, require, or until a license for the operation of the facility shall become effective. Just compensation shall be paid for the use of the facility.

SEC. 189. HEARINGS AND JUDICIAL REVIEW.—

a. In any proceeding under this Act, for the granting, suspending, revoking, or amending of any license or construction permit, or application to transfer control, and in any proceeding for the issuance or modification of rules

and regulations dealing with the activities of licensees, and in any proceeding for the payment of compensation, an award, or royalties under sections 153, 157, 186 c., or 188, the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding. The Commission shall hold a hearing after thirty days' notice and publication once in the Federal Register, on each application under section 103 or 104 b. for a construction permit for a facility, and on any application under section 104 c. for a construction permit for a testing facility. In cases where such a construction permit has been issued following the holding of such a hearing, the Commission may, in the absence of a request therefor by any person whose interest may be affected, issue an operating license or an amendment to a construction permit or an amendment to an operating license without a hearing, but upon thirty days' notice and publication once in the Federal Register of its intent to do so. The Commission may dispense with such thirty days' notice and publication with respect to any application for an amendment to a construction permit or an amendment to an operating license upon a determination by the Commission that the amendment involves no significant hazards consideration.

b. Any final order entered in any proceeding of the kind specified in subsection a. above shall be subject to judicial review in the manner prescribed in the Act of December 29, 1950, as amended (ch. 1189, 64 Stat. 1129), and to the provisions of section 10 of the Administrative Procedure Act, as amended.

SEC. 190. LICENSEE INCIDENT REPORTS.—No report by any licensee of any incident arising out of or in connection with a licensed activity made pursuant to any requirement of the Commission shall be admitted as evidence in any suit or action for damages growing out of any matter mentioned in such report.

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SEC. 191. ATOMIC SAFETY AND LICENSING BOARD.—

a. Notwithstanding the provisions of sections 7(a) and 8(a) of the Administrative Procedure Act, the Commission is authorized to establish one or more atomic safety and licensing boards, each comprised of three members, one of whom shall be qualified in the conduct of administrative proceedings and two of whom shall have such technical or other qualifications as the Commission deems appropriate to the issues to be decided, to conduct such hearings as the Commission may direct and make such intermediate or final decisions as the Commission may authorize with respect to the granting, suspending, revoking or amending of any license or authorization under the provisions of this Act, any other provision of law, or any regulation of the Commission issued thereunder. The Commission may delegate to a board such other regulatory functions as the Commission deems appropriate. The Commission may appoint a panel of qualified persons from which board members may be selected.

b. Board members may be appointed by the Commission from private life, or designated from the staff of the Commission or other Federal agency. Board members appointed from private life shall receive a per diem compensation for each day spent in meetings or conferences, and all members shall receive their necessary traveling or other expenses while engaged in the work of a board. The provisions of section 163 shall be applicable to board members appointed from private life.

SEC. 192. TEMPORARY OPERATING LICENSE.—

a. In any proceeding upon an application for an operating license for a nuclear power reactor, in which a hearing is otherwise required pursuant to section 189 a., the applicant may petition the Commission for a temporary operat-

ing license authorizing operation of the facility pending final action by the Commission on the application. Such petition may be filed at any time after filing of: (1) the report of the Advisory Committee on Reactor Safeguards required by subsection 182 b.; (2) the safety evaluation of the application by the Commission's regulatory staff; and (3) the regulatory staff's final detailed statement on the environmental impact of the facility prepared pursuant to section 102(2) (C) of the National Environmental Policy Act of 1969 (83 Stat. 853) or, in the case of an application for operating license filed on or before September 9, 1971, if the regulatory staff's final detailed statement required under section 102(2) (C) is not completed, the Commission must satisfy the applicable requirements of the National Environmental Policy Act prior to issuing any temporary operating license under this section 192. The petition shall be accompanied by an affidavit or affidavits setting forth the facts upon which the petitioner relies to justify issuance of the temporary operating license. Any party to the proceeding may file affidavits in support of, or opposition to, the petition within fourteen days after the filing of such petition, or within such additional time not to exceed ten days as may be fixed by the Commission. The Commission shall hold a hearing after ten days' notice and publication once in the Federal Register on any such petition and supporting material filed under this section and the decision of the Commission with respect to the issuance of a temporary operating license following such hearing, shall be on the basis of findings on the matters specified in subsection b. of this section. The hearing required by this section and the decision of the Commission on the petition shall be conducted with expedited procedures as the Commission may by rule, regulation, or order deem appropriate for a full disclosure of material facts on all substantial issues raised in connection with the proposed temporary operating license.

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b. With respect to any petition filed pursuant to subsection a. of this section, the Commission shall issue a temporary operating license upon finding that:

(1) the provisions of section 185 have been met with respect to the temporary operating license;

(2) operation of the facility during the period of the temporary operating license in accordance with its terms and conditions will provide adequate protection of the environment during the period of the temporary operating license; and

(3) operation of the facility in accordance with the terms and conditions of the temporary operating license is essential toward insuring that the power generating capacity of a utility system or power pool is at, or is restored to, the levels required to assure the adequacy and reliability of the power supply, taking into consideration factors which include, but need not be limited to, alternative available sources of supply, historical reserve requirements for the systems involved to function reliably, the possible endangerment to the public health and safety in the event of power shortages, and data from appropriate Federal and State governmental bodies which have official responsibility to assure an adequate and reliable power supply. The temporary license shall contain such terms and conditions as the Commission may deem necessary, including the duration of the license and any provision for the extension thereof, and the requirement that the licensee not retire or dismantle any of its existing generating capacity on the ground of the availability of the capacity from the facility which is operating under the temporary license. Any decision or other document authorizing the issuance of any temporary license pursuant to this section shall recite with specificity the reasons justifying the issuance. The decision of the Commission with respect to the issuance of a temporary operating license shall be subject to judicial

review pursuant to the Act of December 29, 1950, as amended (ch. 1189, 64 Stat. 1129).

c. The hearing on the application for the final operating license otherwise required pursuant to section 189 a. shall be concluded as promptly as practicable. The Commission shall vacate the temporary operating license if it finds that the applicant is not prosecuting the application for the final operating license with due diligence. Issuance of a temporary operating license pursuant to subsection b. of this section shall be without prejudice to the position of any party to the proceeding in which a hearing is otherwise required pursuant to section 189 a.; and failure to assert any ground for denial or limitation of a temporary operating license shall not bar the assertion of such ground in connection with the issuance of a subsequent final operating license.

d. The authority under this section shall expire on October 30, 1973.

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RELEVANT SECTIONS OF ENERGY REORGANIZATION ACT OF 1974, PUB. L. 93-438, CH. 73, 88 STAT. 1233, AS AMENDED, 42 U.S.C. §§ 5801 ET. SEQ.

AN ACT

To reorganize and consolidate certain functions of the Federal Government in a new Energy Research and Development Administration and in a new Nuclear Regulatory Commission in order to promote more efficient management of such functions.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Energy Reorganization Act of 1974".

DECLARATION OF PURPOSE

SEC. 2. (2) The Congress hereby declares that the general welfare and the common defense and security require effective action to develop, and increase the efficiency and reliability of use of, all energy sources to meet the needs of present and future generations, to increase the productivity of the national economy and strengthen its position in regard to international trade, to make the Nation self-sufficient in energy, to advance the goals of restoring, protecting, and enhancing environmental quality, and to assure public health and safety.

(b) The Congress finds that, to best achieve these objectives, improve Government operations, and assure the coordinated and effective development of all energy sources, it is necessary to establish an Energy Research and Development Administration to bring together and direct Federal activities relating to research and development on the various sources of energy, to increase the efficiency

and reliability in the use of energy, and to carry out the performance of other functions, including but not limited to the Atomic Energy Commission's military and production activities and its general basic research activities. In establishing an Energy Research and Development Administration to achieve these objectives, the Congress intends that all possible sources of energy be developed consistent with warranted priorities.

(c) The Congress finds that it is in the public interest that the licensing and related regulatory functions of the Atomic Energy Commission be separated from the performance of the other functions of the Commission, and that this separation be effected in an orderly manner, pursuant to this Act, assuring adequacy of technical and other resources necessary for the performance of each.

(d) The Congress declares that it is in the public interest and the policy of Congress that small business concerns be given a reasonable opportunity to participate, insofar as is possible, fairly and equitably in grants, contracts, purchases, and other Federal activities relating to research, development, and demonstration of sources of energy efficiency, and utilization and conservation of energy. In carrying out this policy, to the extent practicable, the Administrator shall consult with the Administrator of the Small Business Administration.

(e) Determination of priorities which are warranted should be based on such considerations as power-related values of an energy source, preservation of material resources, reduction of pollutants, export market potential (including reduction of imports), among others. On such a basis, energy sources warranting priority might include, but not be limited to, the various methods of utilizing solar energy.

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TITLE II—NUCLEAR REGULATORY COMMISSION

ESTABLISHMENT AND TRANSFERS

SEC. 201. (a) There is established an independent regulatory commission to be known as the Nuclear Regulatory Commission which shall be composed of five members, each of whom shall be a citizen of the United States. The President shall designate one member of the Commission as Chairman thereof to serve as such during the pleasure of the President. The Chairman may from time to time designate any other member of the Commission as Acting Chairman during his absence. The Chairman (or the Acting Chairman in the absence of the Chairman) shall preside at all meetings of the Commission and a quorum for the transaction of business shall consist of at least three members present. Each member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote. Action of the Commission shall be determined by a majority vote of the members present. The Chairman (or Acting Chairman in the absence of the Chairman) shall be the official spokesman of the Commission in its relations with the Congress, Government agencies, persons, or the public, and, on behalf of the Commission, shall see to the faithful execution of the policies and decisions of the Commission, and shall report thereon to the Commission from time to time as the Commission may direct. The Commission shall have an official seal which shall be judicially noticed.

* * *

LICENSING AND RELATED REGULATORY FUNCTIONS RESPECTING SELECTED ADMINISTRATION FACILITIES

SEC. 202. Notwithstanding the exclusions provided for in section 110 a. or any other provisions of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2140(a)), the Nuclear Regulatory Commission shall, except as otherwise specifically provided by section 110 b. of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2140(b)), or other law, have licensing and related regulatory authority pursuant to chapters 6, 7, 8, and 10 of the Atomic Energy Act of 1954, as amended, as to the following facilities of the Administration:

(1) Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(2) Other demonstration nuclear reactors—except those in existence on the effective date of this Act—when operated as part of the power generation facilities of any electric utility system, or when operated in any other manner for the purpose of demonstrating the suitability for commercial application of such a reactor.

(3) Facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from activities licensed under such Act.

(4) Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive waste generated by the Administration, which are not used for, or are part of, research and development activities.

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RELEVANT SECTION OF NATIONAL ENVIRONMENTAL POLICY ACT OF 1969, PUB. L. 91-190, 83 STAT. 852, AS AMENDED, 42 U.S.C. § 4332

SECTION 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant im-

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pacts upon such State or Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this Act; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdictions.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by title II of this Act.

FEDERAL REGISTER, VOL. 41, No. 159—
MONDAY, AUGUST 16, 1976

[Docket RM-50-3]

Environmental Effects of the Uranium Fuel Cycle

GENERAL STATEMENT OF POLICY

Two recent decisions by the United States Court of Appeals for the District of Columbia Circuit raise significant questions regarding the future course of Commission licensing activities over the coming months. The decisions are *Natural Resources Defense Council, et al.* v. *NRC*, Nos. 74-1385 and 74-1586; and *Aeschliman, et al.* v. *NRC*, Nos. 73-1776 and 73-1867 (July 21, 1976). The purpose of this policy statement is to indicate how the Commission intends to conduct its licensing activities pending resolution of the several legal questions raised by the decisions. This statement is not intended to resolve, or indicate any resolution of, the question whether the particular licenses before the court in these cases are to be continued, modified, or suspended during the proceedings called for; since the court refused an explicit request to set aside these licenses, the Commission's view is that the court expects it to resolve this question in formal proceedings, in light of the facts and the applicable law. Nor is this statement intended to reflect any position the Commission may take in further litigation in these cases.

As this statement was in the final stages of preparation, the Commission received a proposal for rulemaking from the Natural Resources Defense Council concerning many of the issues discussed herein. Comments on that proposal are solicited in a coordinate FEDERAL REGISTER notice, also published today. Initial consideration of the petition indicates that it varies in several respects from this policy statement. Some of these variations (notably, rules proposed for existing construction permits, LWA's and operat-

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ing licenses) may reflect differing legal interpretations; however, in general, publication of the present policy statement will not irretrievably commit the Commission or others to a course inconsistent with the proposals made. The Commission believes that the need for immediate guidance to its staff and licensing boards, and to the interested public, requires publication of the present statement. The Commission will carefully consider the suggestions of the NRDC and, indeed, is aware that others should have the opportunity to comment on these proposals and to offer suggestions for implementing the recent court of appeals decisions.

While other questions were decided, the principal impact of the court's opinions on Commission actions arises from holdings on three related points:

1. A rule adopted by the former AEC in 1974 to codify the environmental effects of the uranium fuel cycle for individual light-water nuclear power reactors, 10 CFR 51.20(e), was inadequately supported insofar as it treated the reprocessing of spent fuel and of radioactive wastes;

2. The National Environmental Policy Act of 1969 requires analysis of these reprocessing and waste issues, either through rulemaking or in individual licensing proceedings, as a prerequisite to Commission licensing of a nuclear power plant;

3. If the Commission wishes to revise its rule, it must do so by procedures more demanding than the notice-and-comment procedures required for informal rulemaking by the Administrative Procedure Act. (The court divided 2-1 on the question of further procedures, Judge Tamm stating that notice-and-comment procedures would suffice.)

Even though review of one or more of these rulings may be sought, prudent and responsible regulation requires immediate steps to further analyze the reprocessing and waste disposal issues. Accordingly, the Commission's staff has been directed to review the existing literature thoroughly

and to produce on an expedited basis a revised and adequately documented environmental survey on the probable contribution to the environmental costs of licensing a nuclear power reactor that is attributable to the reprocessing and waste management stages of the uranium fuel cycle. It is expected that this statement will be ready on or about September 30, 1976.

The Commission intends to reopen the rulemaking proceeding on the Environmental Effects of the Uranium Fuel Cycle, Docket RM-50-3 for the limited purposes of:

1. Supplementing the record on the reprocessing and waste management issues; and

2. Determining whether or not on the basis of the supplemented record, Table S-3 of 10 CFR 51.20(d) should be amended and, if so, in what respect.

The revised environmental survey just described, together with any amendments to Table S-3 that may be proposed as a consequence of that analysis, will be the basis for these reopened proceedings. We understand the court to regard the procedures originally used as capable of fully ventilating the issues involved, permitting a reasoned Commission discussion and producing a valid rule.[1] These procedures, which included an oral hearing and questioning of witnesses by the presiding panel, are set forth at 38 Fed.

[1] The court understood, as do we, that any such rule would be but one step in national planning for radioactive waste management. The Energy Research and Development Administration has undertaken a comprehensive environmental impact statement, now scheduled for issuance in draft form in April, 1977. A variety of other measures, including this agency's development of goals, objectives, and general environmental criteria for waste management, are also under way. As the Commission then proceeds to develop its regulatory framework for waste management, appropriate environmental impact statements will be prepared. Obviously, areas of uncertainty which may be developed by the present study will help to shape these efforts.

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Reg. 50, January 30, 1973. Alternative procedures, modeled on those to be employed by the Commission in its forthcoming GESMO hearings, have been suggested by the National Resources Defense Council in the petition for rulemaking referenced above. An election of procedures to be followed will be made in a forthcoming notice of hearing, following the comment period on that petition, which closes August 31, 1976.

While the extended rulemaking is in progress, the Commission and its licensing boards will be called upon to decide whether nuclear reactor licenses can issue, and whether previously granted licenses should be suspended, modified, or set aside.

In view of the court's recent decisions, the Commission has concluded that no new full-power operating license, construction permit or limited work authorization should be issued pending the developments to be described below. This conclusion is based on recognition that the grant of each of those authorizations, permits, or licenses is premised upon the completion of an adequate environmental impact statement, and that under the subject decisions, absent an acceptable substitute for those portions of Table S-3 which the court has found inadequately supported, the basis for a complete environmental impact statement will not be in place.

The Commission recognizes that this conclusion may have significant impacts on the availability and costs of nuclear power facilities. At present, two nuclear power plants are at the stage where an operating license might otherwise have been issued immediately; two plants will reach that stage within the next four months. Additionally, a decision on whether to issue construction permits for five power plants would in all probability have been reached by the end of the year. The number of plants affected by a cessation of licensing grows with time, and there are obvious cepts for reprocessing and waste technology do not vary

significantly with the design of nuclear power generating facilities, it is extremely unlikely that the revised environmental survey will result in any modification of these facilities. Only the possibility of discontinuing their construction or use is likely to be at issue.

The Commission does not believe that the licensing constraints here announced must necessarily continue until a rulemaking employing oral hearing procedures has been completed, a process which could take fully a year. If the revised environmental survey justifies, notice and comment rulemaking can provide the basis for an interim rule which would be an adequate substitute for Table S-3 pending issuance of the final rule. In addition to the revised environmental survey, the basis for such an interim rule would include an evaluation of the environmental impact of using that interim rule as a basis for licensing until the final rule is in place, and an assessment of the impact of a suspension of further licensing during that time period. The Commission has directed its staff to develop this information by September 30, 1976. Since interim rulemaking would be accomplished through notice and comment procedures only, an interim rule might be promulgated as early as December 1976, providing a basis for licensing at that time.

The Commission also has under consideration the possibility of a future request to the court of appeals for a stay of its mandate, such a request to be explicitly supported by an appraisal of the likely impact of the court's decision and of granting the stay. If granted, a stay so supported might also provide the basis for resumed licensing.

Finally, some Commission licensing actions do not require preparation of an environmental impact statement, depending upon the circumstances. See 10 CFR 51.5(b). In these instances, which may include authorizations for fuel loading, low-power testing, or amending a construction

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permit, the Commission's regulations require that an environmental impact appraisal be undertaken in order to determine whether an environmental impact statement must be prepared. 10 CFR 51.5(c). The absence of an effective Table S-3 would not preclude licensing that is not dependent upon an environmental impact statement. Consequently the Commission is instructing its staff and licensing boards that they may continue to take such actions where an environmental impact assessment has been made and has resulted in a determination that no environmental impact statement need be prepared. See 10 CFR 51.5, 51.7.

In all other instances, the staff and the licensing boards shall continue to process applications and hold hearings up to the point of, but not including, licensing. However, in any contested proceeding, reprocessing and waste management issues should be deferred pending completion of the interim rulemaking, unless the evidentiary record on those issues has already been completed and is adequate for decision. The Commission wishes to avoid the needless duplication which proceeding both by rulemaking and in individual contested licensing hearings would entail and the overall delay that would result. Where a proceeding is uncontested, licensing shall nevertheless be deferred until the Commission has published the revised environmental survey, documenting the probable contribution to the environmental costs of licensing a nuclear power reactor which is attributable to the reprocessing and waste management stages of the uranium fuel cycle. These values may then be used in reaching a NEPA cost/benefit assessment prerequisite to licensing. Similarly, where a license has been issued, but the action has not become final within the Commission because of pending appeal or possible Commission review, final action or review should be deferred pending publication of the environmental survey; other issues, including as appropriate the issue of suspending activity under the license question, may be resolved in the interim.

With regard to the Vermont Yankee and Midland licenses at issue in the two court of appeals cases, we agree with the view expressed by the Commission's staff that questions of modification or suspension should be resolved in formal proceedings in light of the facts and the applicable law. Since we have decided that reprocessing and waste management issues should be treated generically by rulemaking rather than on a case-by-case basis, the initial question on remand of the Vermont Yankee and Midland orders will be whether the licenses should be continued, modified, or suspended until an interim rule has been made effective. In resolving this question, the Commission intends to assign the matter to licensing boards with instructions to call for briefs from the parties followed by evidentiary hearings if necessary.[2] The same question would arise on a request for a show cause order seeking the suspension or modification on fuel cycle rule grounds of any other nuclear power plant license.

It is the Commission's understanding that resolution of this question turns on equitable factors well established in prior practice and case law. Such factors include whether it is likely that significant adverse impact will occur until a new interim fuel cycle rule is in place; whether reasonable alternatives will be foreclosed by continued construction or operation; the effect of delay; and the possibility that the cost/benefit balance will be tilted through increased investment. See *Coalition for Safe Nuclear Power* v. *AEC*, 463 F.2d 954 (D.C. Cir. 1972); San Onofre, Units 2 and 3, 7 AEC 986, 996-97 (June 1974). General public policy concerns, the need for the project, the extent of the NEPA violation, and the timeliness of objections are also among the pertinent considerations. See, e.g., *Conservation Society of Southern Vermont Inc.* v. *Secretary of Transportation*, 403

[2] An evidentiary hearing on other issues will be required in Midland, barring further review. That hearing, however, should not be commenced until the Midland decision has become final.

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F.2d 927, 933-934 (2d Cir. 1974), vacated on other grounds and remanded, 423 U.S. 809 (1975); *Greene County Planning Board* v. *FPC*, 455 F.2d 412, 414-425 (2d Cir.), cert. denied, 409 U.S. 849 (1972); *City of New York* v. *United States*, 337 F. Supp. 150, 163 (E.D.N.Y.) (three-judge court).[3]

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[3] In its petition for rulemaking, noticed today, the Natural Resources Defense Council suggests that the appropriate course for the interim period concerning facilities which hold effective licenses should be as follows:

Facilities which received operating licenses before July 21, 1976. NRC will order suspension of the operating license for any such facilities unless the licensee can establish that:

(1) Continued operation of the plant essential to maintain a reliable supply of energy to the reliability region of which the plant is a part, taking into account alternative available sources of supply (including purchase power), historical reserve requirements, and available interconnections for transmitting power;

(2) Continued operation of the facility will provide adequate protection for the public health and safety, taking into account the health and safety problems associated with production, storage, transportation, reprocessing, if any, and management or disposal of all nuclear fuel required for the plant and all nuclear wastes produced by the plant;

(3) Continued operation of the facility will not tend to foreclose, now or in the future, implementation of alternatives to the operation of this facility or to the design, construction or operation of other facilities which may be considered following completion of the review required by 10 CFR Section—; and

(4) Continued operation of the facility will not tend to irretrievably commit resources to the production of nuclear fuel or the storage, reprocessing, if any, management or disposal of any nuclear wastes.

Facilities which received construction permits or LWA's prior to July 21, 1976. NRC will order suspension of the LWA or the construction permit unless the license can establish that:

(1) Continued construction of the plant is essential to maintain a reliable supply of energy to the reliability region of which the plant is a part, taking into account alternative available sources of

Finally, even if no request for suspension of modification of an LWA, CP, or OL is received, the Commission will nevertheless determine whether it should sua sponte initiate show cause proceedings based upon information the Commission receives in the revised environmental survey. As noted earlier, this information should be in hand by September 30. The Commission's determination whether or not to reopen all licenses will then be issued.

Dated at Washington, D.C. this 13th day of August 1976.

For the Nuclear Regulatory Commission.

SAMUEL J. CHILK,
Secretary of the Commission.

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supply (including purchase power), historical reserve requirements and available interconnections for transmitting power;

(2) Continued construction will not tend to foreclose, now or in the future, implementation of alternatives to the design, construction or operation of this or other facilities which alternatives may be considered following completion of the review required by 10 CFR—; and

(3) Continued construction will not tend to irretrievably commit resources to the facility.

As noted in the text imediately following this note, we believe the appropriate time for NRC consideration of sua sponte, across-the-board initiation of show cause proceedings to be when it has received from its staff its revised and documented assessment of the reprocessing and waste management issues. While the issues of reprocessing and waste management fully warrant serious and timely attention, no information now at hand calls for so drastic a step in the brief period before this analysis will be available. Also, while the individual factors NRDC suggests are among those relevant to be addressed in seeking a show cause order or in any show cause proceeding, the Commission cannot accept the suggestion that these factors are cumulative and must be satisfied; its own approved prior practice and established judicial precedent permit balancing of these factors to determine where the equities of each particular case lie.

In adopting this approach, one inconsistent with the NRDC petition, the Commission is aware that neither NRDC nor other concerned parties have been formally heard. In commenting on the NRDC petition, any party interested to do so (including NRDC) may file comments addressed to the point.

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FEDERAL REGISTER, VOL. 41, NO. 202,
MONDAY, OCTOBER 18, 1976

NUCLEAR REGULATORY COMMISSION

[10 CFR Part 51]

LICENSING AND REGULATORY POLICY AND PROCEDURES FOR ENVIRONMENTAL PROTECTION

Uranium Fuel Cycle Impacts From Spent Fuel Reprocessing and Radioactive Waste Management

Pursuant to the National Environmental Policy Act of 1969 (NEPA), an environmental impact statement is prepared by the Commission in connection with issuance of a construction permit or operating license for each light water nuclear power reactor. These statements contain a detailed evaluation of the environmental impacts of construction and operation of the plant and a discussion of reasonable alternatives, as well as an overall assessment of the costs and benefits of the licensing action.

In November 1972, a document entitled "Environmental Survey of the Nuclear Fuel Cycle" was published by the Directorate of Licensing of the Atomic Energy Commission (AEC). The purpose of that document was to establish a technical basis for informed consideration of environmental effects of the uranium fuel cycle in the environmental impact statements for individual light water power reactors (LWR's). In the Survey the nuclear fuel cycle was treated generically. This permitted an overview of the entire industry without the need to evaluate particular plants. To compensate for the consequent lack of specific site and design detail, estimates were made of effluent concentration, radiation dose rates, and human population densities appropriate to the model fuel-cycle facilities. This approach was necessary because it was not possible to trace the fresh and spent fuel for an individual reactor back or forward through the fuel cycle and thereby pin-

point environmental impacts at specific plants at specific points in time.

Comments on the Environmental Survey were solicited, and an informal rulemaking hearing was held on February 1 and 2, 1973. The purpose of the hearing was to consider possible amendments of Appendix D of 10 CFR Part 50 which would, by rule, specify the environmental effects of the uranium fuel cycle to be factored into the assessment of costs and benefits in environmental impact statements for individual LWR's. Written comments were received in response to the FEDERAL REGISTER notice, and recommendations for improvement were offered during the hearings. After consideration of the written comments and the hearing record, the AEC promulgated the final fuel cycle rule (so-called Table S-3) on April 22, 1974 (39 FR 14188). It was intended that, with the inclusion of environmental impacts from Table S-3, the environmental impact statements for individual LWR's would represent a full and candid assessment of costs and benefits consistent with the legal requirements and spirit of NEPA. The AEC indicated in its decision that the rule and survey would be reexamined from time to time to accommodate new information.[1]

The same Table S-3 is now included in 10 CFR Part 51.

On January 19, 1975, the Atomic Energy Commission was abolished and its licensing and regulatory responsibilities transferred to the Nuclear Regulatory Commission (Commission). On July 21, 1976, the United States Court of Appeals for the District of Columbia Circuit decided "*Natural Resources Defense Council* v. *NRC*," a case involving judicial review of the fuel-cycle rule, and "*Aeschli-*

[1] In this regard, the Nuclear Regulatory Commission Staff is initiating a study designed to examine information that has developed since promulgation of the fuel cycle rule in 1974 for the purpose of updating the rule in areas other than waste management and reprocessing.

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man v. *NRC*," a related case involving the exclusion of fuel cycle issues from an individual power reactor licensing proceeding. The Court approved the overall approach and methodology of the fuel cycle rule. It found that, "[r]egarding most phases of the fuel cycle * * * the underlying Environmental Survey represented an adequate, even admirable job, of describing the processes involved." The Court noted that the survey assembled data on consumption of resources, discussed the risks of accidents and other hazards in detail, and provided numerous references to the scholarly literature and technical reports in support of the conclusions as to environmental impact. However, the Court found that the rule was inadequately supported by the record insofar as it treated two particular aspects of the fuel cycle—the impacts from reprocessing of spent fuel and the impacts from radioactive waste management.

The Commission issued a General Statement of Policy (41 FR 34707, August 16, 1976) in response to the decisions. In that statement, the Commission announced its intention to reopen the rulemaking proceeding on the environmental effects of the fuel cycle to supplement the existing record on waste management and reprocessing impacts and to determine whether the rule should be amended, and, if so, in what respect. The Commission directed the Staff to prepare on an expedited basis a well-documented supplement to the survey to establish a basis for identifying environmental impacts associated with fuel reprocessing and waste management activities that are attributable to the licensing of a model light-water reactor.

The revised survey, "Environmenal Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0116 (Supplement 1 to WASH-1248), (hereinafter referred to as "supplement"), has now been completed and copies are available for public inspection at the Commission's Public Document Room at 1717 H St., N.W., Washington, D.C. 20555.

In the original fuel cycle rule the environmental impacts for the fuel cycle activities necessary for the support of a LWR were summarized in a Table S-3. These effects were also displayed by type of activity in Table S-3A of WASH-1248, April 1974. In the supplement, only the environmental impacts that would fall under the columns entitled "Reprocessing" (Column F) and "Waste Management" (Column G) of Table S-3A of WASH-1248 (and related transportation—part of Column H) are addressed, consistent with the Court decisions and the Commission's General Statement of Policy. The Table set forth below shows proposed revisions to Table S-3 in light of the supplement. The format of Table S-3A is followed in order to show the separate impacts from reprocessing and waste management. Both the old and new impact values are included to facilitate review. Any final interim rule will revert back to the Table S-3 format.

"Waste management," as that term was used in the fuel cycle rule and is used in this notice of proposed rulemaking, refers to the handling of wastes from post-fission operations in the fuel cycle, or other operations from which wastes arise and are shipped to some storage or burial facility. In the fuel cycle rule wastes disposed of at the sites of their generation (e.g., tailings from mills) were included in the impacts from those operations (i.e., in the other appropriate columns of Table S-3A). These wastes are mentioned in the supplement in the description of the fuel cycle, but since these aspects of the original survey were upheld by the Court, they are not addressed here.

A complete understanding of the management of nuclear wastes requires a discussion of the operations through which wastes pass from the place and time of their generation to their disposal. Therefore, the supplement discusses the operations at each plant in which the wastes are treated, stored, and prepared for shipment to offsite storage or

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disposal facilities. The supplement also deals with the transportation of these wastes.

In a reprocessing plant, the highly radioactive spent-fuel elements are chopped into short segments, the fuel is dissolved by strong acid, and the resultant solution is separated chemically to give (1) uranium in solution, (2) plutonium in solution, and (3) fission products and unwanted actinides in the waste stream. In this process, a number of other materials become contaminated and emerge as wastes of lesser radioactivity. All of these materials are made into a form suitable for shipment to the next step in the fuel cycle or to disposal. The impacts of all these processes are addressed in the supplement.

In the recently issued report "Final Generic Environmental Statement on the Use of Recycle Plutonium in Mixed Oxide Fuel in Light Water Cooled Reactors," NUREG-0002 (hereafter referred to as GESMO), five alternative fuel cycle options were evaluated, and three were reviewed in detail: no recycle, uranium-only recycle, and uranium and plutonium recycle. The fuel cycle rule, Table S-3, had as its base a modification of the uranium-only recycle process in which separated plutonium was stored for possible later use, rather than being recycled or treated as a waste stream as in GESMO. This supplement considers the no-recycle fuel option in addition to the uranium-only recycle option. For the latter, plutonium is treated as a waste. The uranium-plutonium recycle option is treated in detail in GESMO and is beyond the scope of this proceeding. The individual entries in the revised Table which follows are maximized in that they are based on the uranium-only recycle process, or no-recycle, whichever produced the greater impacts.

In the supplement the model fuel-cycle facilities, in terms of capacities, waste generation rates, and types of waste produced, are drawn from GESMO, and the environmental impacts associated with reprocessing and waste manage-

ment activities are normalized to a model reactor corresponding to that in WASH-1248.

The supplement represents a full and candid discussion of spent fuel reprocessing and waste management impacts, and is based on a thorough survey of the available data. Throughout the supplement there is frequent reference to the scholarly literature and technical reports. Indeed, over 175 reports and papers were cited and reviewed. All these references are publicly available.[2] In addition, copies of a petition for rulemaking, submitted by the Natural Resources Defense Council on August 10, 1976, relating to procedures and approach to the assessment of the environmental impacts of reprocessing and waste management, and public comments thereon, have been made available in the Commission's Public Document Room.

In general, the supplement indicates that the available data is adequate for a quantitative assessment of impacts from normal operations of all parts of the reprocessing and waste management system. Accidents were analyzed for most components of the complete system, but the bases for these analyses in the literature were varied, and all accident sequences could not be analyzed. Sample events are analyzed for all system components, and for one part (transportation) data on accidents from normal commercial activities is quite extensive. One of the goals of GESMO was to assess the cumulative impacts of the five fuel cycle alternatives. In Chapter VIII of that document these cumulative impacts through the year 2000 were discussed and tabulated in detail, including detail in the format used in Table S-3A of WASH-1248. These adequately describe the cumulative impacts of reprocessing and waste management with regard to the present generation of light water nuclear power reactors now under review or soon to come under review for licenses.

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[2] Those few which are not commonly in available literature have been made available in the Commission's Public Document Room.

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In areas where information necessary for a complete quantitative assessment of environmental impacts is lacking (risks from sabotage, special risks from disposal of spent fuel or separated plutonium, and risks from failure in the long term of the geologic repository for high level waste) Federal programs are underway to resolve existing uncertainties.

With respect to risks from long term repository failure, representative studies have been done with varying degrees of depth and sophistication, but there are still uncertainties in areas such as the effect of waste presence on repository stability; the probabilities and consequences of various types of intrusive acts by humans; the availability of data to be used in modeling studies; the design and regulatory actions needed to minimize possibilities of repository failure; projection of future societal habits and demography, and, finally, the relative importance of the various potential initiating events. Research programs are underway which should resolve most of these uncertainties over the next few years.

Where data necessary for a complete quantitative assessment of impact is lacking, the Commission's expert judgment must be brought to bear on the information available. Among the issues the Commission expects to be addressed in comments on the Supplement and this proposed interim rule and in future hearings is whether the judgments, and supporting reasons, set forth in the supplement regarding such situations are sound. Where contrary judgments are suggested, the bases for those judgments should also be provided. The supplement also includes a summary presentation of ongoing Federal programs directed at providing more complete information. While these programs are not expected to provide substantial new data for a year or more, new information that does develop through these programs or the Commission's continuing analyses in con-

nection with the proceeding will be brought into the analysis.

The revised interim table is being proposed by the Commission as an interim substitute for the waste management and reprocessing values presently set forth in Table S-3A. After receipt and analysis of comments received in response to this notice, a final interim rule may be promulgated for use as a basis for LWR licensing. As the Commission's General Statement of Policy indicated, after promulgation of such a final interim rule, a public hearing will be held in order to facilitate effective public participation on the question whether the interim rule should be amended for future use and, if so, in what respect. The time, place, and format for the hearing will be set forth in a separate FEDERAL REGISTER notice. The interim rule would be used for LWR licensing only during the period of time required for completion of the public hearing and proceedings thereon. In order to reflect the interim character of the rule, any rule adopted will be made effective for no longer than an eighteen month period.

The Commission's present belief is that the supplemental survey can serve as an adequate foundation for such a rule. The supplement is based on a thorough survey of the available data on waste management and reprocessing impacts, and states to the extent now possible the uncertainties and risks associated with these impacts. While the court has required an acceptable substitute for the portions of Table S-3 which it found inadequately supported as the basis for the necessary environmental impact analyses, the obvious impacts of a lengthy cessaton of licensing pending final and complete analysis of the questions at issue may be considered in passing on the interim licensing question. Cf. "*Union of Concerned Scientists* v. *A.E.C.*", 499 F.2d 1069 (D.C. Cir. 1974) at 1081-1086. At the Commission's direction, a separate analysis of the environmental, social and economic impacts of the use of an interim rule for licensing of

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LWR's has been prepared, entitled "Impacts of Later Reversing A Decision to Adopt or Not to Adopt An Interim Rule Permitting Construction or Operation of Nuclear Power Plants," October 1976. Assuming that a final rule permitting construction or operation of LWR's to proceed is adopted, this study suggests that failure to promulgate an interim rule would result in substantial increases in economic, social, and environmental costs. Substantial costs would also be incurred should construction or operation of LWR's proceed under an interim rule, and the final rule (when factored into individual impact statements) require that ongoing construction or operation cease. Such a cessation of construction or operation would, of course, only occur in this context if the present analysis of reprocessing and waste management impact proves to be dramatically in error. The Commission's present judgment is that such an outcome is unlikely.

The Commission is aware of the several comments filed with it in response to its General Statement of Policy and to the August 10 NRDC petition for rulemaking in this matter. The procedural aspects of that Statement and petition, to the extent not addresed here, will be dealt with in a notice of hearing to be published shortly. Technical aspects of the comments, including NRDC's extensive presentation and the economic data supplied by electric utility groups, have been considered in developing both the supplement and the statement of impacts. Of course, the technical judgments in both documents remain open for further comment in connection with the proposed rule.

The staff found the technical aspects of the NRDC comments, in the main, to state important elements in the area of waste management, but many were outside the scope of the present study. For instance, the staff relied on analysis of available technology (as suggested by NRDC) and dealt with some special waste types (such as spent fuel and plutonium) suggested for consideration. To the extent

that some of the suggestions for inclusion were beyond present technology or are not contemplated by any of those responsible for the management of wastes, they were judged not to contribute to a reasonable projection of impacts and were not included in the survey. And, in declining to consider such matters here, the Commission does not imply any judgment regarding the appropriateness of these questions for future inquiry in other proceedings.

This notice of proposed rulemaking does not address several issues identified in the General Statement of Policy. These issues include the questions whether the Commission, sua sponte, should initiate show cause proceedings against present holders of LWR construction permits, limited work authorizations, or operating licenses; whether circumstances revealed by the supplement warrant any change in the Commission's policy regarding how cause proceedings against present licensees initiated by others; and whether licenses may be issued in pending cases, and if so under what conditions, in advance of the adoption of an interim rule. Resolution of these questions, or some of them, may be affected by the action of the United States Court of Appeals for the District of Columbia last Friday, October 8. The court, in staying its mandate in the proceeding which led to issuance of the General Statement of Policy, indicated its view that the Commission could continue licensing activities "on condition that (the Commission) shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of the proceedings herein." The Commission anticipates resolving these questions, in light of the supplement and the court's recent action, in the very near future. In particular, parties to existing show cause proceedings are being invited to submit views regarding the possible suspension of those show cause proceedings to the Secretary of the Commission on or before October 22, 1976.

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Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, NEPA, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of Title 5 of the United States Code, notice is hereby given that adoption of the substance of the following Table is contemplated as a revision to Table S-3 of 10 CFR Part 51. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendments, or to submit comments on the underlying supplement to Wash-1248 or impact analysis, should send them to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Section, by December 2, 1976. Copies of the supplement and impact analysis may be examined at the Commission's Public Document Room at 1717 H Street, Washington, D.C. and at the Commission's local Public Document Rooms. Copies of the comments received in response to this notice will be placed in the Commission's Public Document Room in Washington, as received. Single copies of the supplement and impact analysis may be obtained without charge, to the extent of supply, by writing to the Division of Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(Sec. 161, Pub. L. 83-703, as amended, 68 Stat. 948, as amended (42 U.S.C. 2201); Sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332), Sec. 201, Pub. L. 93-438, as amended, 88 Stat. 1242, 89 Stat. 415 (42 U.S.C. 5841).)

For the Nuclear Regulatory Commission.

Dated at Washington, D.C. this 13th day of October 1976.

SAMUEL J. CHILK,
Secretary of the Commission.

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TABLE 2.10

SUMMARY OF IMPACTS OF REPROCESSING AND WASTE MANAGEMENT PER REY
(Columns F, G, and H of Table S-3A)

Natural Resource Use	F[a] Reprocessing (NUREG-0116)	F[a] Reprocessing (WASH-1248)	G[a] Waste Management (NUREG-0116)	G Waste Management (WASH-1248)	H[a] Transportation (NUREG-0116)	H Transportation (WASH-1248)	Fuel Cycle Totals[b] (NUREG-0116)	Fuel Cycle Totals[b] (WASH-1248)
Land (Acres)								
Temporarily Committed	32[b]	3.9	3.2	—	—	—	94	63
Undisturbed Area	28.5	3.7	2.9	—	—	—	73	45
Disturbed Area	3.5	0.2	0.28	—	—	—	22	18
Permanently Committed	0.12	0.03	2.6[c]	0.2	—	—	7.1	4.6
Overburden moved (millions of MT)	0.1	—	0.0015	—	—	—	2.8	2.7
Water (millions of gal)								
Discharged to air	6.6	4.0	0.38	0.13	—	—	159	156
Discharged to water bodies	54.8	6.0	0.058	0.13	—	—	11,090	11,040
Discharged to ground	—	—	0.96	—	—	—	124	123
Total Water	61.4	10.0	1.4	0.26	—	—	11,373	11,319
Fossil Fuel								
Electrical energy (thousand MW-hr.)	4.0	0.45	0.62	.0077	—	—	321	317
Equivalent coal (thousand MT)	1.5	0.16	0.22	.003	0.016	—	117	115
Natural Gas (million scf)	28.6	—	3.3	—	—	—	124	92

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Table 2.10 (Continued)

Natural Resource Use	F[d] Reprocessing (NUREG-0116)	F[d] Reprocessing (WASH-1248)	G[e] Waste Management (NUREG-0116)	G Waste Management (WASH-1248)	H[e] Transportation (NUREG-0116)	H Transportation (WASH-1248)	Fuel Cycle Totals[b] (NUREG-0116)	Fuel Cycle Totals[b] (WASH-1248)
Effluents								
Chemical (MT)								
Gases (MT)								
SO_x	5.4	6.2	0.030	—	0.045	—	4,400	4,400
NO_x	21.9	7.1	0.031	—	0.62	2.6	1,190	1,177
Hydrocarbons	0.5	0.02	0.02	—	0.062	—	14	13.5
CO	0.5	0.04	0.007	—	0.38	—	29.6	28.7
Particulates	0.6	1.6	0.62	—	0.022	—	1,154	1,156
Other Gases								
F^-	0.05	0.11	—	—	—	—	0.67	0.72
HCl	6E-4	—	0.013	—	—	—	0.14	—
Liquids								
SO_4	0.02	0.4	—	—	—	—	9.9	10.3
NO_3	—	0.9	—	—	—	—	25.8	26.7
Fluoride	—	—	—	—	—	—	12.9	12.9

[a] Maximized for either of the two cycles (U-only and no recycle).
[b] Including columns A-E of Table S-3A of WASH-1248.
[c] For wastes only.
[d] Differences between NUREG-0116 and WASH-1248 estimates of reprocessing impacts are attributable to the use of new model plant for this Supplement.
[e] Disposal included here did not appear in WASH-1248.
[f] Not released to the environment.
[g] Major radionuclide releases in the Waste Management column are attributable to the disposal of spent fuel (no-recycle option) and the conservative assumption of complete release of gaseous nuclides in the geologic repository.
[h] The contributions to temporarily committed land are not prorated over 30 years, since the complete temporary impact accrues regardless of whether the plant services one reactor for one year or 57 reactors for 30 years.

(Table 2.10 continued on next page)

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Table 2.10 (Continued)

Natural Resource Use	F[d] Reprocessing (NUREG-0116)	F[d] Reprocessing (WASH-1248)	G[a] Waste Management (NUREG-0116)	G Waste Management (WASH-1248)	H[c] Transportation (NUREG-0116)	H Transportation (WASH-1248)	Fuel Cycle Totals[b] (NUREG-0116)	(WASH-1248)
Effluents (Cont'd.)								
Ca^{++}	—	—	—	—	—	—	5.4	5.4
Cl^-	0.09	0.2	—	—	—	—	8.5	8.6
Na^+	0.02	5.3	—	—	—	—	12.1	16.9
NH_3	—	—	—	—	—	—	10.0	11.5
Tailings Solutions (thousands)	—	—	—	—	—	—	240	240
Fe	—	—	—	—	—	—	0.4	0.4
Solids	—	—	0.42	—	—	—	91,000	91,000
Radiological (curies)								
Gases (Including entrainment)								
Rn-222	—	—	0.0071	—	—	—	74.5	74.5
Ra-226	—	—	5.3E-7	—	—	—	0.02	0.02
Th-230	—	—	5.3E-7	—	—	—	0.02	0.02
Uranium	0.000039	—	7.9E-6	—	—	—	0.034	0.032
Tritium (thousands)	18.1	16.7	14[e]	—	—	—	18.1	16.7
Kr-85 (thousands)	400	350	290[e]	—	—	—	400	350
I-129	0.03	0.0024	1.3[e]	—	—	—	1.3	0.0024
I-131	0.83	0.024	—	—	—	—	0.83	0.024
Fission Products	0.18	1.0	0.003	—	—	—	0.021	1.0
Transuranics	0.023	0.004	0.0014	—	—	—	0.024	0.004
C-14	24	—	19[e]	—	—	—	24	—

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Table 2.10 (Continued)

Natural Resource Use	F[d] Reprocessing (NUREG-0116)	F[d] Reprocessing (WASH-1248)	G[a] Waste Management (NUREG-0116)	G Waste Management (WASH-1248)	H[a] Transportation (NUREG-0116)	H Transportation (WASH-1248)	Fuel Cycle Totals[b] (NUREG-0116)	Fuel Cycle Totals[b] (WASH-1248)
Effluents (Cont'd.)								
Liquids								
Uranium & Daughters	—	—	5.4E-6	—	—	—	2.1	2.1
Fission & Activation Products	—	—	5.9E-6	—	—	—	5.9E-6	—
Ra-226	—	—	—	—	—	—	0.0034	0.0034
Th-230	—	—	—	—	—	—	0.0015	0.0015
Th-234	—	—	—	—	—	—	0.01	0.01
Tritium (thousands)	—	2.5	—	—	—	—	—	25
Ru-106	—	0.15	—	—	—	—	—	0.15
Solids (buried onsite)[f]								
Other than high level (shallow)	0.52	—	4,700	—	—	—	5,300	601
TRU & HLW (deep)	—	—	1.1E+7	—	—	—	1.1E+7	—
Thermal (billions of Btu)	75.5	61	88	1.0	0.014	0.03	3,462	3,360

[a] Maximized for either of the two cycles (U-only and no recycle).
[b] Including columns A-E of Table S-3A of WASH-1248.
[c] For wastes only.
[d] Differences between NUREG-0116 and WASH-1248 estimates of reprocessing impacts are attributable to the use of new model plant for this Supplement.
[e] Disposal included here did not appear in WASH-1248.
[f] Not released to the environment.
[g] Major radionuclide releases in the Waste Management column are attributable to the disposal of spent fuel (no-recycle option) and the conservative assumption of complete release of gaseous nuclides in the geologic repository.
[h] The contributions to temporarily committed land are not prorated over 30 years, since the complete temporary impact accrues regardless of whether the plant services one reactor for one year or 57 reactors for 30 years.

FEDERAL REGISTER, VOL. 41, NO. 219,
THURSDAY, NOVEMBER 11, 1976

ENVIRONMENTAL EFFECTS OF THE URANIUM FUEL CYCLE

Supplemental General Statement of Policy

In a notice of proposed rule making dated October 13, 1976 and published in the FEDERAL REGISTER on October 18, 1976 (41 FR 45849) entitled "Uranium Fuel Cycle Impacts from Spent Fuel Reprocessing and Radioactive Waste Management", the Commission solicited comments on a proposed revision to Table S-3 of 10 CFR Part 51 and a related survey ("Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle" NUREG-0116-Supplement 1 to WASH-1248) and impact analysis ("Impacts of Later Reversing a Decision to Adopt or Not to Adopt an Interim Rule Permitting Construction or Operation of Nuclear Power Plants", October 1976). The October 13, 1976 notice of proposed rule making was an action forecast by a General Statement of Policy which the Commission issued (41 FR 34707, August 16, 1976) in response to two recent decisions (July 21, 1976) by the United States Court of Appeals for the District of Columbia Circuit (*Natural Resources Defense Council* v. *NRC* and *Aeschliman* v. *NRC*).

While the October 13, 1976 notice addressed a number of issues raised in the General Statement of Policy, certain questions were explicitly deferred with the notation that the Commission anticipated resolving these questions in the very near future. The deferred questions were whether the Commission, sua sponte, should initiate show cause proceedings against present holders of construction permits, limited work authorizations, or operating licenses for light water reactors; whether circumstances revealed by the supplement warrant any change in the Commission's policy regarding show cause proceedings against present licensees initiated by others; and whether licenses may be

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issued in pending cases, and if so under what conditions, in advance of the adoption of an interim rule. This Supplemental Statement of Policy addresses two of those questions.

Two factors appear to the Commission to bear decisively on each of these questions. First, the United States Court of Appeals for the District of Columbia Circuit on October 8, 1976 has stayed its mandate in the proceedings which gave rise to the issuance of the General Statement of Policy. In staying its mandate the court indicated that the Commission could continue licensing activities "on condition that (the Commission) shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of the proceedings herein." Second, the breadth and quality of the present analysis of reprocessing and waste management impacts set forth in the supplemental survey lead the Commission to believe it improbable that the assessment that such impacts are slight will prove to be dramatically in error.

In light of the stay of the court's mandate, the quality of the present analysis of reprocessing and waste management impacts set forth in the supplemental survey, and the relatively short period of time anticipated before the interim rule can be adopted,[1] the Commission presently perceives no compelling reason, on either legal or policy grounds, for initiating sua sponte show cause proceedings against present holders of light water reactor construction permits, limited work authorizations, or operating licenses. Rather, the Commission's present belief is that it would not be justified in instituting new proceedings against the holders of such permits, authorizations and licenses on Table S-3 grounds pending the outcome of the current rulemaking. With respect to show cause-type proceedings

[1] The Commission believes that a decision whether to adopt an interim rule can be made during January 1977.

initiated by others pursuant to the August 16, 1976 General Statement of Policy, which are presently under way, the Memoranda and Orders we are issuing today in those proceedings have the effect of suspending them pending anticipated adoption of an interim rule.

On the question of issuing licenses in pending cases, five principal considerations are relevant and manifest. First, it would be inappropriate for the Commission to continue to license facilities on the basis of the existing reprocessing and waste storage values of Table S-3 without taking account of the improved and expanded analysis now at hand. Second, that improved and expanded analysis is not now reflected in any currently applicable Commission rule. Third, while continued licensing solely on the basis of the present Table S-3 values for reprocessing and waste management would be inappropriate, it is now clear that the court envisions further licensing; and the information now available to the Commission indicates that a halt in licensing activity is more likely to have a severe social and environmental impact than continued licensing on the conditional basis the court suggests, taking some account of the newly developed analysis. Fourth, there is no bar to the use of the revised chemical reprocessing and waste storage values of the S-3 Table in pending proceedings—prior to the adoption of an interim rule—on the basis of individual NEPA analyses of reprocessing and waste management impacts. In connection with this last consideration, however, there is the significant practical constraint raised by the needless duplication which proceeding both by rulemaking and in individual licensing hearings would entail and the overall delay that would result. The Commission is sharply aware of the advantages of avoiding such duplication and attendant strain on the resources of parties by focusing resolution of issues which may be raised regarding the survey in a single proceeding. Finally, the Commission anticipates that the interim rule as pro-

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mulgated will closely resemble the proposed rule published on October 13, and like that proposed rule, will not produce results significantly different from those obtained under the current rule.

With these considerations in mind, the Commission has concluded that licensing may resume on a conditional basis using the existing Table S-3 if, but only if, the revised values are examined to determine whether, if those values were used, the result would tilt the cost-benefit balance against the issuance of the license. Under this approach, the accuracy of the revised values will not be an issue in the licensing proceeding. While this approach may leave the validity of licenses in some doubt, it has the advantage of lessening duplication of the resources of the parties to the proceedings. Most importantly it responds to the suggestion in the court's order of October 8, 1976 that continued licensing under the existing rule on a conditional basis would be appropriate, without ignoring the newly developed values. The additional analysis called for may also avoid the need for further proceedings on these licenses, should rulemaking eventuate in adoption of these or comparable values.

In sum, the Commission has concluded that subject to the limitations hereinafter expressed, full-power operating licenses, construction permits and limited work authorizations may be issued in pending cases in advance of the adoption of an interim rule on the basis of the currently effective chemical reprocessing and waste storage values of Table S-3. The Commission directs that such licenses may be issued only if further, specific analysis is performed to determine whether, if the revised chemical reprocessing and waste storage values set forth in the Commission's notice of proposed rulemaking of October 18, 1976 were used, the result would tilt the cost-benefit balance against the issuance of the license. If it appears that the balance would be so tilted, then the proceeding will be suspended,

with respect to chemical reprocessing and waste storage issues, pending further action by the Commission. Under this approach the accuracy of the revised values is not to be an issue in the proceeding, but the determination whether the cost-benefit balance would be tilted, if the revised values were used, is fully at issue in the proceeding. Further, any full-power operating license, construction permit or limited work authorization issued under this approach must be conditioned in accordance with the court's order (staying its mandate) dated October 8, 1976.

To the extent that this Supplemental General Statement of Policy differs from the Commission's General Statement of Policy of August 16, 1976, the latter is modified accordingly.[2]

Dated at Washington, D.C. this 5th day of November, 1976.

For the Nuclear Regulatory Commission.

SAMUEL J. CHILK,
Secretary of the Commission.

[2] In seeking a stay of mandate from the court of appeals, the Commission informed the court of its General Statement of Policy and the intention there stated to make further licensing actions depend on the basis of a further request to the court, to be made within a few weeks of issuance of the revised survey. In the Commission's view, the specific reference to continued licensing in the court's order moots this proposed action. The Commission also notes that the court granted all petitions for stay, not merely its own; the other petitions filed were not conditioned as was the Commission's.

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FEDERAL REGISTER, VOL. 42, NO. 49,
MONDAY, MARCH 14, 1977

TITLE 10—ENERGY

CHAPTER I—NUCLEAR REGULATORY COMMISSION

PART 51—LICENSING AND REGULATORY POLICY AND PROCEDURES FOR ENVIRONMENTAL PROTECTION

Uranium Fuel Cycle Impacts From Spent Fuel Reprocessing and Radioactive Waste Management

Agency: Nuclear Regulatory Commission

Action: Effective interim rule.

Summary: The Commission has previously identified environmental impact values for the uranium fuel cycle which are to be included in environmental reports and environmental impact statements for individual light water nuclear power reactors. This rule amends the prior regulations so as to incorporate revised values, based on a new study of the available information, for the nuclear waste management and nuclear fuel reprocessing portions of the fuel cycle.

Effective Date: March 14, 1977.

For Further Information Contact:

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Supplementary Information: On October 18, 1976, the Nuclear Regulatory Commission (hereafter Commission or NRC) gave notice in the FEDERAL REGISTER (41 FR 45849) that in contemplated promulgating an interim rule which would revise Table S-3 of 10 CFR Part 51 to include new specific impact values derived in light of its "Environmen-

tal Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle" NUREG—0116 (Supplement 1 to WASH-1248 (hereinafter referred to as "Supplement"). Interested persons were invited to submit written comments on the Supplement and proposed interim rule by December 2, 1976, copies of which are available for public inspection at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D. C. 20555. After careful consideration of the comments received and within the context of the following discussion, the Commission has adopted the values set forth in the interim rule which will remain effective for eighteen months unless good cause is shown to extend the period of effectiveness.

BACKGROUND

Pursuant to the National Environmental Policy Act of 1969 (NEPA), an environmental impact statement must be prepared by the Commission in connection with issuance of a construction permit or operating license for each light water nuclear power reactor. These statements should contain a detailed evaluation of the environmental impacts of construction and operation of the plant and a discussion of reasonable alternatives, as well as an overall assessment of the costs and benefits of the licensing action.

In November 1972, a document entitled "Environmental Survey of the Nuclear Fuel Cycle" (hereinafter referred to as "Survey") was published by the Directorate of Licensing of the Atomic Energy Commission (AEC). Comments on the Survey were solicited, and an informal rule making hearing was held on February 1 and 2, 1973. The purpose of the hearing was to consider possible amendments to Appendix D of 10 CFR Part 50 which would, by rule, specify the environmental effects of the uranium fuel cycle to be factored into the assessment of costs and benefits in environmental impact statements for individual light water nuclear power reactors (LWR's). Written comments

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were received in response to the FEDERAL REGISTER notice, and recommendations for improvement were offered during the hearings. After consideration of the written comments and the hearing record, the AEC promulgated the final fuel cycle rule (the so-called Table S-3) on April 22, 1974 (39 FR 14188). It was intended that with the inclusion of environmental impacts from Table S-3, the environmental impact statements for individual LWR's would set forth a full and candid assessment of costs and benefits consistent with the legal requirements and spirit of NEPA. The AEC indicated in its decision that the rule and Survey would be re-examined from time to time to accommodate new information. The same Table S-3 was included in 10 CFR Part 51.

On January 19, 1975, the Atomic Energy Commission was abolished and its licensing and regulatory responsibilities transferred to the Nuclear Regulatory Commission. On July 21, 1976, the United States Court of Appeals for the District of Columbia Circuit decided *Natural Resources Defense Council* v. *NRC*,[1] a case involving judicial review of the fuel-cycle rule, and *Aeschliman* v. *NRC*,[2] a related case involving the exclusion of fuel cycle issues from an individual power reactor licensing proceeding. The court approved the overall approach and methodology of the fuel cycle rule and found that, regarding most phases of the fuel cycle, the underlying Environmental Survey represented an adequate job of describing the impacts involved.[3] However, the court found that the rule was inadequately

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[1] — F. 2d — (D.C. Cir. 1976), 9 ERC 1149, *cert. granted sub nom., Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council*, 45 U.S.L.W. 3570 (U.S. Feb. 22, 1977) (No. 76-419). No action has as yet been taken by the Supreme Court on a related petition for certiorari filed in *Baltimore Gas and Electric Co* v. *Natural Resources Defense Council*, No. 76-458.

[2] — F. 2d — (D.C. Cir. 1976), 9 ERC 1289, cert. granted, 45 U.S.L.W. 3570 (U.S. Feb. 22, 1977), (No. 76-528).

[3] Note 1, supra, at 1159.

supported by the record insofar as it treated two particular aspects of the fuel cycle—the impacts from reprocessing of spent fuel and the impacts from radioactive waste management.

In response to the court decision, the Commission issued a General Statement of Policy (41 FR 34707, August 16, 1976) announcing its intention to reopen the rulemaking proceeding on the environmental effects of the fuel cycle to supplement the existing record on waste management and reprocessing impacts to determine whether the rule should be amended and, if so, in what respect.[4] The Commission thus indicated its intent to handle the question of the environmental impacts of waste management and reprocessing generically rather than in individual licensing proceedings, a decision supported by language of the court in the *Vermont Yankee* case.[5] The Commission directed the Staff to prepare on an expedited basis a well-documented supplement (NUREG-0116) to the Survey (WASH-1248) to establish a basis for identifying environmental impacts associated with fuel reprocessing and waste management activities that are attributable to the licensing of a model light-water reactor.

The revised survey was completed in October, 1976, and the Commission issued the October 18, 1976 notice regarding the proposed interim rule. The comments received in response to that notice and the Commission's responses to those comments comprise NUREG-0216, Supplement 2 to WASH-1248 (hereinafter "Supplement 2").

The Commission indicated in that notice that the values proposed therein were to be considered as a proposed inter-

[4] The Court of Appeals stayed its mandate in the proceedings which gave rise to the General Statement of Policy, and the Supreme Court's grant of certiorari has the legal effect of continuing the stay of mandate in effect.

[5] Note 1, supra, n.17, at 1154-1155.

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im substitute for the values originally set forth in Table S-3A of WASH-1248. After receipt and analysis of comments received, a final interim rule was to be promulgated for use in LWR licensing. The interim rule was to be made permanent only after a public hearing had been held to further facilitate effective public participation. Under a Supplemental Statement of Policy published in the FEDERAL REGISTER on November 11, 1976 (41 FR 49898) licensing of individual LWR's was resumed on a conditional basis pending promulgation of the final interim rule provided that the old values for reprocessing and waste management contained in Table S-3A were compared with the values in the proposed interim rule to determine if application of the new values would tilt the cost/benefit balance in individual cases. All values in the table except those relating to waste management and reprocessing were to remain the same.

The Commission has decided to pattern the final interim rule after the original Table S-3. Supplements 1 and 2 provide detailed narrative explanation of the new values in Table S-3 and give greater illumination to the background and context of the revised values.

SCOPE AND PURPOSE OF SUPPLEMENTS AND RULE

At the outset the Commission wishes to make clear that its purpose in preparing Supplements 1 and 2 and the interim rule was quite limited. The sole purpose of preparation of Supplement 1 and the rule was to identify and quantify environmental impacts attributable to the reprocessing and waste management portions of the LWR fuel cycle. The environmental impacts so identified are to be used only in the preparation of environmental impact statements for individual light water reactors. Supplement 1 and the rule have fulfilled this purpose. It was not the purpose of this proceeding to decide which of the various waste management alternatives should or will be employed in practice,

or to develop site selection criteria or to define parameters for licensing of any of the Energy Research and Development Administration's (ERDA) waste management facilities. A separate and comprehensive series of programs has been undertaken to serve these broader purposes. ERDA has several programs in progress including a program for the preparation of a generic environmental impact statement on high-level waste management, a program to evaluate geologic formations and specific sites for repositories, programs in research and development of waste solidification methods and development of interim storage sites. NRC's ongoing programs include the preparation of regulations for the licensing of ERDA waste management facilities and activities, the development of performance criteria for solidified high-level waste and the development of site suitability criteria for high-level waste repositories.

These programs are described in greater detail in Appendices B and C to Supplement 1 and other agency programs are described in Appendix F to Supplement 2. Supplement 1 itself and the S-3 rule are only a very small part of these ongoing activities.

In addition to these ongoing programs the Commission has undertaken the preparation of two generic environmental impact statements on fuel cycle issues. One, the Generic Environmental Statement on Mixed Oxide Fuels, "GESMO," is in the legislative hearing stage of a rulemaking proceeding. Work has commenced on the other, the Generic Environmental Impact Statement on Uranium Milling, and a draft statement is expected in mid-1978.

The Commission has used some of the information in the GESMO document, NUREG-0002, in its preparation of Supplement 1 and the interim rule in much the same manner as it has used other available literature. While the Commission realizes that additional information may be generated during the GESMO proceeding, all of the information used in the Supplement, including the relevant in-

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formation from NUREG-0002, will be re-examined during preparation of the final fuel cycle rule and will be subjected to close scrutiny during public hearings on the final rule along with other available information. To the extent that comments in this proceeding have raised issues related to the material in the GESMO document, the Commission has independently evaluated the comments and taken them into account in this proceeding.

Sufficiency of Information and Assessment

In order to fulfill its purpose of identifying in a generic proceeding the environmental impacts attributable to the reprocessing and waste management portions of the LWR fuel cycle, the Commission had to decide whether the information produced by Supplements 1 and 2 provided a sufficient basis for proceeding with an interim rule. The Commission addressed the question whether the risks of proceeding on the basis of information which may later be called into question in a final rulemaking proceeding outweigh the costs which would certainly flow from a hiatus in LWR licensing. See *National Air Carrier Association* v. *CAB*, 436 F.2d 185, 191 (D.C. Cir. 1970). The costs attributable to a hiatus in licensing were explored by the Commission's Staff in a paper entitled "Impacts of Adopting or Not Adopting an Interim Rule Permitting Construction or Operation of Nuclear Power Plants" which was cited by the Commission in its Supplemental Statement of Policy (41 FR 49898) and placed in the Public Document Room along with NUREG-0116. The paper concluded that the environmental and economic costs attributable to a twelve-month delay in the licensing of reactors were substantial.

A number of comments on the Supplement and the proposed interim rule also dealt with the adequacy of this study. These comments are discussed in detail in the document entitled "Response to Comments on a Staff paper entitled 'Impacts of Adopting or Not Adopting an Interim

Rule Permitting Construction or Operation of Nuclear Power Plants' ". In the Commission's view, the study was adequate to fulfill its limited purpose of highlighting for the Commission and others the costs of a hiatus in licensing that would be caused by the failure to promulgate an interim rule. Even if environmental costs of a delay in licensing were excluded from consideration, the economic costs of a twelve-month delay would be high. Thus, the costs which would flow from a hiatus in licensing were explored by the Commission and the Commission has concluded that they would be substantial. However, as was noted above, costs alone could not determine the Commission's resolution of the question whether to proceed by interim rule. Against these costs must be weighed the risks of proceeding by interim rule where the sufficiency of the information supporting the rule might be later called into question during the final rulemaking proceeding on the permanent rule. Accordingly, the Commission critically examined the Supplement and, in light of some comments questioning its adequacy attempted to judge its quality.

The Supplement supporting the new interim rule (NUREG-0116) was the product of extensive effort by a Task Force comprised of a number of highly qualified individuals with years of experience in the field. Since a great deal of work in the field had already been completed when the Task Force began its analysis, the Task Force was not required to start completely fresh in its consideration of the issues. Supplement 1 is not merely an uncritical description of the available literature on the subject of reprocessing and waste management. Rather the Task Force carefully examined voluminous amounts of information in the field, selected from those sources the best possible information available and then critically analyzed the information and, where warranted, rechecked calculations and performed independent analysis. Further, the Staff performed a detailed analysis of the comments received on the Supplement. The responses to every substantative com-

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ment received are contained in Supplement 2, NUREG-0216. Supplements 1 and 2 contain a detailed analysis of the impacts of waste management and reprocessing and provide a sufficient informational basis for the interim rule promulgated herein.

The Commission has observed that there are gaps in the information needed for detailed assessment of waste management and disposal technology. While there is the need to obtain additional data and to consider from time to time any new findings that would have a bearing upon the values set forth in Table S-3, the lack of some relevant data in certain areas by no means excuses the Commission from making an informed and reasoned judgment now regarding the environmental impacts which may flow from waste management and reprocessing activities.

The situation is analogous to the Atomic Energy Commission's issuance of interim acceptance criteria for emergency core cooling systems, as reviewed in *Union of Concerned Scientists* v. *AEC*, 499 F.2d 1069 (D.C. Cir. 1974). As the AEC did in that instance, the Commission recognizes that "analytical methods capable of realistic prediction of all phenomena known or suspected to occur" in the course of waste management and disposal are not available and agrees that definitive experiments have not been carried out. However, the Commission's position, which is reflected in the Task Force Report as revised, is the same as the one that was given judicial acceptance in Union of Concerned Scientists:

> In the absence of such perfection, adequate assurance of safety can be obtained from an appropriately conservative analysis based on available experimental information. In areas of incomplete knowledge, conservative assumptions or procedures must be applied. When further experimental information or improved calculation techniques become available, the conservatisms presently imposed will be reevaluated and a more realistic approach will be taken. 449 F. 2d 1069, at 1086.

It should be noted that the interim rule does not deal with a safety question as did the emergency core cooling system but rather attempts to quantify the environmental impacts of reprocessing and waste management. "[C]onservative analysis based on available experimental information" is even more appropriate in such a case where the goal is not to reach a conclusion whether a level of safety has been met, but rather to develop values for use in environmental cost benefit analyses.

The Task Force Report (NUREG-0116) and the Comments and Responses (NUREG-0216) contain and document numerous conservatisms applied to the analysis of environmental impacts from waste management and reprocessing activities. In those few cases where detailed estimates could not be made, the Task Force exercised its expert judgment to reach a best estimate. Since a calculation could not be made, the conservatism of these few judgments cannot absolutely be established. However, it is the Commission's view that the impacts estimated on expert judgments are quite small in any case and that adequate conservatism has been applied.

The Commission would be reluctant to proceed if it believed the values in Table S-3, and the information from which they are derived, were called into question to any significant degree by substantial evidence, but this is not the case. *Union of Concerned Scientists*, 499 F.2d at 1085. To some extent, as noted above, the setting of values in Table S-3 involved making "policy judgments where no factual certainties exist or where facts alone do not provide the answer." *Industrial Union Department, AFL-CIO* v. *Hodgson*, 499 F.2d 467, 476 (D.C. Cir. 1974). In such cases —especially where the evidence is "difficult to come by, uncertain, or conflicting because it is on the frontiers of scientific knowledge"—it is appropriate for the Commission to proceed to apply its expertise; its conclusions must be rationally justified, not based on hunches or wild guesses, but conclusions may be drawn "from theoretical projections from imperfect data, from probative preliminary data not

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yet certifiable as 'fact', and the like." *Ethyl Corp.* v. *EPA*, 541 F.2d 1, 28 (D.C. Cir. 1976); see also *Amoco Oil Co.* v. *EPA*, 501 F.2d 722 (D.C. Cir. 1974). The Commission may, as to some extent it has done here, make probabilistic assessments that must suffice until data becomes "sufficiently quantifiable to yield to meaningful analysis." *Union of Concerned Scientists, supra*, 499 F.2d at 1093.

The Commission has also been mindful of its obligation to identify the particular findings in the literature that it deems significant, *Portland Cement Association* v. *Ruckelshaus*, 486 F.2d 375, 400 (D.C. Cir. 1973), cert. denied 417 U.S. 921 (1974), and to examine the reasons for mistakes in prior assessments in order that its assessment may be complete. In this regard, the Commission has examined past experiences in the waste management field. There, in several instances, past scientific judgments were shown to have been in error. However, one cannot look at those mistakes without recognizing that developments in technology have since occurred which make repetition of past mistakes less likely. Past experience has provided an indication of the types of impacts that are possible. Furthermore, the Supplement is based on very conservative assumptions regarding levels of releases. The Supplement has included in its model only technologies which are presently available and the Commission has made every effort to make the most thorough evaluation of the associated environmental impacts that the present state of available knowledge will permit.

In summary, the Commission has decided to proceed with promulgation of the interim rule. It has looked at the uncertainties and unknowns identified in the Supplement. It has weighed the risks of proceeding with licensing on the basis of the interim rule against the costs of not proceeding. The Commission has found that the costs of not proceeding outweigh the risks of proceeding by interim rule especially given the fact that a relatively short period of time, eighteen months, may pass before a more thorough discussion of the issues will be completed in the final rulemaking proceeding. There is no perceived need for the Commission to wait for

site specific information or to wait for ERDA's generic environmental impact statement on high-level waste management. In some areas—including critical areas where a substantial measure of expert judgment had to be applied—it is unlikely that substantial new information of a quantitative nature will be available for years. As the Court said in *Citizens for Safe Power* v. *NRC*, 524 F.2d 1291, 1297 (D.C. Cir. 1975):

> Absolute or perfect assurances are not required by (the Atomic Energy Act), and neither present technology nor public policy admit of such a standard. It was for the Commission to arrive at a rational, practical and principled conclusion upon the basis of reasonably available evidence.

Interim Rulemaking

Some of the comments have raised the question whether an interim rule, without the benefit of oral hearings, is an appropriate mechanism for establishing the impacts presented in Table S-3. The Commission continues to believe that such action is fully warranted, in the light of the competing factors identified above.

The fixing of values under an interim rule is consistent with the opinion of the court in *NRDC* v. *NRC*, as well as settled case and statutory law. Indeed, interim rules may be adopted without any prior notice and opportunity for public comment if public procedures would be impracticable, unnecessary, or contrary to the public interest, 5 U.S.C. § 553(b). The AEC's adoption of interim acceptance criteria for emergency core cooling systems was found to be a valid exercise of this authority, for example, in Union of Concerned Scientists, supra, 499 F.2d at 1085.

Furthermore, the quality of the comments and of the Task Force responses to those comments as well as the additional information provided in the course of this interchange give the Commission confidence that no major issues lie hidden as a result of this procedure. While the Commission has chosen to use notice and comment procedures for this interim rulemaking, it intends to held public hearings

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in connection with the final rulemaking to facilitate additional effective public participation. The time, place, and format for the hearing will be set forth in a separate FEDERAL REGISTER notice. Such public hearings are, however, not required to satisfy any constitutional or statutory mandate and, therefore, the use of notice and comment procedures will suffice for interim rulemaking. In *NRDC* v. *NRC*, supra, the Court of Appeals for the District of Columbia Circuit referred neither to the Constitution nor to the Administrative Procedure Act when it set for itself the task "to decide whether the procedures provided by the agency were sufficient to ventilate the issues." 9 ERC at 1156. Rather, the court's analysis of asserted procedural inadequacies in the earlier S-3 proceedings apparently rests on judicial notions, fundamentally common-law in character, concerning what is required to produce a record that will facilitate judicial review.[6] The same court has stated, "Although we have recognized that provision of oral hearings may be wise in some instances, we have never held that due process requires oral presentation of views as a matter of course," *Pickus* v. *U.S. Board of Parole*, 543 F. 2d 240, 246 (D.C. Cir. 1976). In circumstances calling for prompt action it follows that use of notice and comment procedures for interim rulemaking is sufficient. The Commission has made every effort to present a full statement of available information, and to explain the reasons which persuade it to adopt, for a relatively short period, the values set forth in revised Table S-3.

In order to reflect its interim character, the rule that is presently being adopted will be made effective for the limited period of eighteen months. The Commission believes that final rulemaking proceedings can be completed within this period and wishes to stress that the present rule is only a temporary measure pending completion of the final rulemaking proceedings which will reflect additional public participation. However, if good cause is shown, the period of effectiveness of the interim rule can be extended.

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[6] As earlier indicated in note 1, supra, the Supreme Court has granted certiorari in *NRDC* v. *NRC*.

The amended rule incorporating revised Table S-3 is being made effective immediately because the Commission has determined that it has good cause for doing so: the revised Table S-3 provides a more current and comprehensive basis for evaluation than does the original Table S-3; there is a need to base licensing decisions on the best available information; and the values in the interim rule are not substantially different from the values in the proposed interim rule upon which interested persons had the opportunity to comment. (Supplemental General Statement of Policy, 41 FR 49898, November 11, 1976; see also 5 U.S.C. 553(d)(3)).

Accordingly, any operating license, construction permit, or limited work authorization (LWA) that may hereafter be issued must take into account the revised values contained in this rule. Licenses, permits, or limited work authorizations issued before July 21, 1976 in which the originally effective chemical reprocessing and waste storage values of Table S-3 were utilized will remain effective, principally because the values in the new interim rule are not sufficiently different from the values in the original Table S-3 to warrant revocation or suspension on cost-benefit grounds. Any show cause or similar proceedings initiated in these cases pursuant to the August 16, 1976 General Statement of Policy will be terminated.

Operating licenses, construction permits or limited work authorizations granted after July 21, 1976 and which therefore were subject to the outcome of the proceedings in *NRDC* v. *NRC*, will also remain in effect, and any show cause or similar proceedings initiated in response to the August 16, 1976 General Statement of Policy in these cases are also to be terminated. The values in the interim rule are not substantially different from those which, under the Commission's Supplemental General Statement of Policy, were required to be considered by Atomic Safety and Licensing Boards in connection with the issuance of such licenses. Where the Boards have found that the cost-benefit balance would not be tilted by the values in the proposed

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interim rule, no further proceedings are necessary since the values in the final interim rule are not substantially different from the values in the proposed rule. Similarly, cases now pending before the Boards in which the evidentiary record on fuel cycle impact issues has been compiled are to be decided on the basis of the existing record; since the interim rule values are not substantially different from those in the previously proposed rule, the reopening of the record to receive additional testimony would not appear to be justified.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the National Environmental Policy Act of 1969, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendment to 10 CFR Part 51 is published as a document subject to codification, to be effective on March 14, 1977.

10 CFR Part 51 is amended by revising § 51.20(e) to read as follows:

§ 51.20 Applicant's Environmental Report—Construction Permit Stage.

• • • • • • • • • • •

(e) In the Environmental Report required by paragraph (a) for light-water-cooled nuclear power reactors, the contribution of the environmental effects of uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low level wastes and high level wastes related to uranium fuel cycle activities to the environmental costs of licensing the nuclear power reactor, shall be as set forth in Table S-3, Summary of environmental considerations for uranium fuel cycle. No further discussion of such environmental effects shall be required. This paragraph does not apply to any applicant's environmental report submitted prior to June 6, 1974. The values set forth in Table S-3 in this paragraph will not be applied in any proceeding as of September 14, 1978.

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TABLE S-3.

SUMMARY OF ENVIRONMENTAL CONSIDERATIONS FOR URANIUM FUEL CYCLE[1]

[Normalized to model LWR annual fuel requirement (WASH-1248) or reference reactor year (NUREG-0116)]

Natural resources use	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
Land (acres):		
Temporarily committed[2] ...	94	
Undisturbed area	73	
Disturbed area	22	Equivalent to 110 MWe coal-fired powerplant.
Permanently committed	7.1	
Overburden moved (millions MT).	2.8	Equivalent to 95 MWe coal-fider powerplant.
Water (millions of gallons):		
Discharged to air	159	= 2 pct of model 1,000 MWe LWR with cooling tower.
Discharged to water bodies .	11,090	
Discharged to ground	124	
Total	11,373	<4 pct of model 1,000 MWe LWR with once-through cooling.
Fossil fuel:		
Electrical energy (thousand of megawatt hours).	321	<5 pct of model 1,000 MWe LWR output.
Equivalent coal (thousands of MT).	117	Equivalent to the consumption of a 45 MWe coal-fired powerplant.
Natural gas (millions of scf)	124	<0.3 pct of model 1,000 MWe energy output.

See footnotes at end of table.

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Table S-3 (Continued)

Natural resources use	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
Effluents—chemical (MT):		
Gases (including entrainment[3]		
SO$_x$	4,400	
NO$_x$[4]	1,190	Equivalent to emissions from 45 MWe coal-fired plant for a year.
Hydrocarbons	14	
CO	29.6	
Particulates	1,154	
Other gases:		
F$^-$	.67	Principally from UF_6 production, enrichment, and reprocessing. Concentration within range of state standards—below level that has effects on human health.
HCl	.014	
Liquids:		
SO_4^-	9.9	From enrichment, fuel fabrication, and reprocessing steps. Components that constitute a potential for adverse environmental effect are present in dilute concentrations and receive additional dilution by receiving bodies of water to levels below permissible standards. The constituents that require dilution and the flow of dilution water are: NH_3—600 ft^3/s. NO_3—20 ft^3/s. Fluoride—70 ft^3/s.
NO_3^-	25.8	
Fluoride	12.9	
Ca^{++}	5.4	
Cl^-	8.5	
Na^+	12.1	
NH_3	10.0	
Fe	.4	

See footnotes at end of table.

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Table S-3 (Continued)

Natural resources use	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
Effluents (con't)		
Tailings solutions (thousands of MT).	240	From mills only—no significant effluents to environment.
Solids	91,000	Principally from mills—no significant effluents to environment.
Effluents—radiological (curies):		
Gases (including entrainment):[5]		
Rn-222	74.5	Principally from milling operations and excludes contributions from milling.
Ra-226	.02	
Th-230	.02	
Uranium	.034	
Tritium (thousands)	18.1	
C-14	24	
Kr-85 (thousands)	400	
Ru-106	.14	Principally from fuel reprocessing plants.
I-129	1.3	
I-131	.83	
Fission products and transuranics.	.023	
Liquids:[6]		
Uranium and daughters	2.1	Principally from milling—included in tailings liquor and returned to ground—no effluents; therefore, no effect on environment.

See footnotes at end of table.

Table S-3 (Continued)

Natural resources use	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
Effluents (con't)		
Ra-226	.0034	From UF_6 production.
Th-230	.0015	
Th-234	.01	From fuel fabrication plants—concentration 10 pct of 10 CFR 20 for total processing 26 annual fuel requirements for model LWR.
Fission and activation products.	5.9×10^4	
Solids (buried on site):		
Other than high level (shallow).	11,300	9,100 Ci comes from low-level reactor wastes and 1,500 Ci comes from reactor decontamination and decommissioning—buried at land burial facilities. 600 Ci comes from mills—included in tailings returned to ground~60 Ci comes from conversion and spent fuel storage. No significant effluent to the environment.
TRU and HLW (deep)	1.1×10^7	Buried at Federal repository.
Effluents—thermal (billions of British thermal units).	3,462	<4 pct of model 1,000 MWe LWR.
Transportation (person-rem): Exposure of workers and general public.	2.5	
Occupational exposure (person-rem).	22.6	From reprocessing and water management.

See footnotes at end of table.

FOOTNOTES

[1] Data supporting this table are given in the "Environmental Survey of the Uranium Fuel Cycle," WASH-1248, April 1974; the "Environmental Survey of the Reprocessing and Waste Management portions of the LWR Fuel Cycle," NUREG-0116 (Supp. 1 to WASH-1248); and the "Discussion of Comments Regarding the Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0216 (Supp. 2 to WASH-1248). The contributions from reprocessing, waste management and transportation of wastes are maximized for either of the 2 fuel cycles (uranium only and no recycle). The contribution from transportation excludes transportation of cold fuel to a reactor and of irradiated fuel and radioactive wastes from a reactor which are considered in table S-4 of sec. 51.20(g). The contributions from the other steps of the fuel cycle are given in columns A-E of table S-3A of WASH-1248.

[2] The contributions to temporarily committed land from reprocessing are not prorated over 30 years, since the complete temporary impact accrues regardless of whether the plant services 1 reactor for 1 yr. or 57 reactors for 30 yrs.

[3] Estimated effluents based upon combustion of equivalent coal for power generation.

[4] 1.2 pct from natural gas use and process.

[5] Gaseous effluents from waste management contribute about 9 person-rem (total body) to offsite U.S. population per annual fuel requirement or reference reactor year for the uranium only recycle option. This contribution for the no recycle option is 170 person-rem. For comparison, all radiological gaseous effluents from fuel cycle operations contribute about 370 person-rem (total body) to offsite U.S. population per annual fuel requirement or reference reactor year. This dose is <0.002 pct of the average natural background radiation dose to this population. Fuel reprocessing contributes about 330 person-rem (total body) of the total of 370 person-rem to offsite U.S. population. Person-rem is an expression for the summation of whole body doses to individuals in a group. Thus, if each member of a population group of 1,000 people were to receive a dose of 0.001 rem (1 millirem), or if 12 people were to receive a dose of 0.5 rem (500 millirem) each, the total person-rem dose in each case would be 1 person-rem. The dose to the offsite U.S. population due to average natural background radiation is about 2×10^7 person-rem per year. The Commission's final environmental statement on use of mixed-oxide fuel in LWR's (NUREG-0002) indicates a maximum release of about 4800 Ci of Rn-222 when contributions from mining are included. NUREG-0002 also indicates that mining contributes about 500 person-rem (total body) and that milling contributes about 100 person-rem (total body) of a total of about 610 person-rem (total body) to offsite U.S. population per annual fuel requirement.

[6] Liquid radiological effluents from reprocessing and waste management activities in the fuel cycle contribute 1.4×10^{-4} person-rem (total body) to offsite U.S. population per annual fuel requirement or reference reactor year. For comparison all radiological liquid effluents from fuel cycle operations contribute about 100 person-rem (total body) to offsite U.S. population per annual fuel requirement or reference reactor year. This dose is <0.0005 pct of the average natural background radiation dose to this population.

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Effective date: The foregoing amendments take effect on March 14, 1977.

(Sec. 102, (Pub. L. 91-190, 83 Stat. 853, as amended, Pub. L. 94-83, 89 Stat. 424 (42 U.S.C. 4332); Sec. 161, as amended, Pub L. 83-703, 68 Stat. 948 (42 U.S.C. 2201); Sec. 202, Pub. L. 93-438, 88 Stat. 1244 (42 U.S.C. 5842))

Dated at Washington, D.C., this 7th day of March 1977.

For the Nuclear Regulatory Commission.

SAMUEL J. CHILK,
Secretary of the Commission.

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY

August 2, 1973

MEMORANDUM FOR HEADS OF AGENCIES

SUBJECT: Revision of agency procedures for preparation of Environmental Impact Statements

On Wednesday, August 1, 1973, after extensive consultation with interested agencies and opportunity for public comment, the Council issued revised guidelines for the preparation of environmental impact statements pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA). Attached is a copy.

Section 1500.3(a) requires agencies to revise their NEPA procedures for preparation of impact statements so that they conform with the Council's revised guidelines. This requirement applies to procedures issued at both the departmental and sub-departmental level. Attachment A to this memorandum is a list of some of the major changes between the Council's new guidelines and its April 1971 guidelines that should be considered by your staff. The Council's staff will contact your staff in the very near future to arrange for timely consultation, pursuant to the requirements of Section 1500.3(a), on the specific changes required in your agency's procedures.

The effective date for the new guidelines (incorrectly listed in the *Federal Register* as a result of a typesetting error as January 28, 1973) is January 28, 1974. Revised agency NEPA procedures are required to be published in the *Federal Register* in proposed form for public comment before November 1, 1973, and in final form no later than January 28, 1974. Draft and final impact statements filed with the Council after that date are formally subject to the requirements of the new guidelines.

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The Council strongly recommends, however, that agencies adopt several of the new provisions (listed in Attachment B) on an interim basis, within the next 45 days. These new provisions are aimed at more effectively involving the public in the impact statement process; none of them should entail significant administrative burdens.

/s/ RUSSELL E. TRAIN
Russell E. Train
Chairman

ATTACHMENT A

Major Changes Between New CEQ Revised NEPA Guidelines and Previous April, 1971 Guidelines on the Preparation of Environmental Impact Statements

The CEQ revised NEPA guidelines issued August 1, 1973 include the following major provisions not contained in its previous April, 1971 guidelines:

1. Agencies, in terms of their particular programs, should prepare guidance on those types of actions likely to require preparation of an impact statement, and those types of actions not likely to require preparation of a statement. Guideline § 1500.6(c) For those actions likely to require preparation of a statement and those actions that may require preparation of a statement depending on the circumstances, agencies should identify what basic information needs to be gathered, how and when it is to be assembled and analyzed, and on what bases a decision whether to prepare a statement will be made. Guideline § 1500.6(c)

2. Agencies should be alert to the need to prepare, in appropriate cases, program statements and statements on a group of interrelated projects. Agencies engaging in major technology research and development programs should develop procedures for

periodic evaluation to determine when a program statement is required for such programs. Guideline § 1500.6(d)

3. Agency procedures should include an early notice system for informing the public of decisions to prepare impact statements, and include provisions apprising the public of agency determinations, in certain situations set out in the guidelines, that impact statements are not required. Guideline § 1500.6(e)

4. Agency procedures should include provisions limiting actions which an applicant is permitted to take prior to completion and review of the final statement with respect to his application. Guideline § 1500.7(a)

5. Additional guidance on when public hearings should be held is included, and agencies are called upon to set out their policies and practices on hearings. Guideline § 1500.7(d)

6. More detailed guidance is given on the required contents of impact statements. Statements should set forth, *inter alia*, the purpose of the proposed action, the relation of the proposed action to land use plans, policies, and controls for the affected area, secondary environmental effects likely to result from the proposed action, and an indication of what other interests and considerations of Federal Policy are thought to offset the proposed action's adverse environmental effects. Agencies should consider in their impact statements, where appropriate, alternative designs or details of their proposed actions which would significantly conserve energy. Guideline § 1500.8(a)

7. Areas of environmental impact are grouped into three major categories: (1) pollution, (2) energy

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supply and natural resources development, and (3) land use and land management. Each of these categories is divided into particular types of environmental impacts with respect to which agencies are requested to give special attention. Guidelines—Appendix II.

8. Agency procedures should facilitate public participation in the impact statement process. Guidelines § 1500.9(d) and 1500.11(d) Agencies should provide impact statement materials free of charge, to the extent practicable, or at a fee which is not more than the agency's actual reproduction costs. Guideline § 1500.9(d)

9. Increased guidance is given on the responsibilities of agencies in commenting on impact statements. Guideline § 1500.9(e)

10. The minimum period for review of draft impact statements is 45 days. Agencies should consider the magnitude and complexity of the statement and the extent of citizen interest in the proposed action in deciding on an appropriate comment period for a particular statement. Guideline § 1500.9(f)

11. The minimum period for review of an impact statement is calculated from the date of publication in the *Federal Register* of the Council's listing notifying the public of issuance of the impact statement. Guideline § 1500.11(c)

12. Agencies should send copies of their final statements to all parties who filed substantive comments on the corresponding draft statement. Guideline § 1500.10(b)

13. Agency NEPA procedures should ensure that the final impact statement and comments "accompany the proposal through the existing agency review

processes." Guideline §1500.11(b) In this connection agency NEPA procedures for major categories of agency action should identify what these agency review processes are. Guideline §1500.3(a)

14. Agencies shall respond to requests from the Council concerning their impact statement operations including requests for the production of either an impact statement or a negative determination that an impact statement is not necessary. Guideline §1500.11(f)

ATTACHMENT B

Provisions of the Guidelines Recommended for Agency Implementation by September 15, 1973

The Council strongly recommends that the following provisions of its new NEPA guidelines (38 *Fed. Reg.* 20550, Aug. 1, 1973) be implemented on an interim basis, no later than September 15, pending formal revision of individual agency NEPA procedures:

1. Agencies should maintain lists of their impact statements under preparation, and their determinations that certain specific proposed actions do not require the preparation of an impact statement. Guideline §1500.6(c)

2. The minimum period for review of draft statements should be lengthened from 30 days to 45 days. The length of the review period should be calculated from the date of publication in the *Federal Register* of the Council's listing notifying the public of issuance of the impact statement. Guidelines §§1500.9(f) and 1500.11(c)

3. Agencies should endeavor to provide impact statement materials free of charge, to the fullest extent practicable, or at a fee which is not more than the agency's reproduction costs. Guideline §1500.9(d)

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4. A copy of the final impact statement for a proposed action should be sent to all parties who filed substantive comments on the corresponding draft statement. Guideline § 1500.10(b)